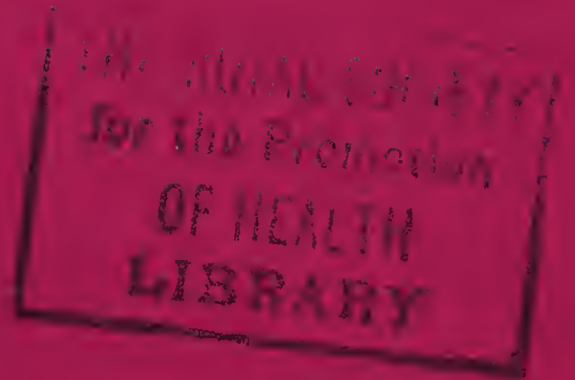


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National Health and Welfare

ANNUAL REPORT
FOR THE FISCAL YEAR
ENDED MARCH 31, 1960

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CANADA

THE DEPARTMENT OF
NATIONAL HEALTH AND WELFARE

ANNUAL REPORT

FOR THE FISCAL YEAR
ENDED MARCH 31

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ANNUAL REPORT

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His Excellency Major-General Georges P. Vanier, D.S.O., M.C., C.D.
Governor General and Commander-in-Chief of Canada.

MAY IT PLEASE YOUR EXCELLENCY:

The undersigned has the honour to present to Your Excellency
the Annual Report of the Department of National Health and Welfare
for the fiscal year ended March 31, 1960.

Respectfully submitted,

J. WALDO MONTEITH,
Minister of National Health and Welfare.

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*To the Honourable J. Waldo Monteith, F.C.A., M.P.,
Minister of National Health and Welfare, Ottawa.*

SIR:

We hereby submit the Annual Report of the Department of National Health and Welfare for the fiscal period ending March 31, 1960.

In the year under review, continued progress was achieved throughout the Department's operations. On the health side, a further extension took place in the implementation of the Hospital Insurance and Diagnostic Services Act. Agreements were signed with the Provinces of New Brunswick and Prince Edward Island as well as with the Northwest Territories and programs got under way in these areas on July 1, 1959, October 1, 1959, and April 1, 1960, respectively. By the year-end, federal contributions were being made on behalf of approximately 12 million Canadians in 9 provinces with total advances for the twelve month period amounting to over \$149 million.

From the outset, close co-operation between federal and provincial authorities has been a key factor in forwarding this program. Carried out largely through the medium of periodic technical conferences, this co-operation was given a more permanent and convenient basis by the establishment during 1959 of an Advisory Committee on Hospital Insurance and Diagnostic Services. Consisting of senior federal and provincial officials, this Committee is supported by a number of sub-committees providing technical advice and assistance on various specialized problems such as quality of care, research, and statistics.

Another important advisory committee was formed under departmental auspices in 1959. This group was assigned the task of studying the use of live polio virus vaccine as a possible supplement to the Salk vaccine. The need for continued effort in this field was highlighted during the year under review which witnessed one of the most serious outbreaks of paralytic polio ever registered in Canada. While 70 per cent of all Canadians under 40 years of age had been fully immunized with the Salk vaccine, a total of 1,870 cases was reported, mostly among unvaccinated persons.

In the field of radiation protection, an expansion in departmental activities occurred in 1959. With respect to radio-active fallout studies, for example, a new network of sampling stations was initiated to collect samples of air, rainfall, and soil. This is expected to furnish additional information to that collected in the existing milk powder sampling program, the results of which were made available to the public in 1959 on a quarterly rather than an annual basis. The Department also assumed responsibility for carrying out Canada's contribution to the United Nations' effort in furthering studies and international co-operation regarding the effects on man of atomic radiation.

On the welfare side in the Department's operations, the Unemployment Assistance Act was implemented by the Province of Quebec and the Yukon Territory, thereby making it truly nation-wide in scope. Programs commenced

in these two areas on July 1st and November 1st, 1959, respectively. With regard to other assistance programs, meetings were held in September of the Advisory Boards under the Old Age Assistance, Blind Persons and Disabled Persons Allowances Acts to consider certain changes in regulations. All of the provinces were represented at these discussions which produced a number of recommendations for consideration by the Governor-in-Council.

In January 1960, the Speech from the Throne indicated the Government's intention of introducing an amendment to the Old Age Security Act to establish a basis for payment of pensions to pensioners residing outside of Canada. This legislation had not been introduced by the end of the fiscal year but extensive arrangements were being forwarded for administering the proposed changes.

Also in January, arrangements were entered into between Canada and the United Kingdom relating to the provision of social security benefits to persons making application for benefits in the United Kingdom who have resided for a period of time in Canada. Set out in an exchange of correspondence between the United Kingdom High Commissioner to Canada and the Minister of National Health and Welfare, they embodied a relaxation in certain legislative requirements of the United Kingdom in favour of persons going to or returning to the British Isles with earlier periods of residence in Canada.

In the field of civil defence and emergency planning, the proposed reorganization of federal functions announced near the end of the previous fiscal year was put into effect on September 1, 1959. As a result, this Department was reassigned responsibility for emergency health and welfare planning as well as for the operation of training facilities at the national Civil Defence College at Arnprior. In line with their extension of activities into over-all preparations for survival and continuity of Government, the former Civil Defence Health Services were reorganized and placed on a Division basis.

Sir, this letter of transmittal would not be complete without mention of the continued contribution of the members of the staff. Throughout the many and varied activities carried out by the Department, their loyalty and devotion to duty has been of vital importance during the year under review.

Respectfully submitted,

G. D. W. CAMERON,
*Deputy Minister of National Health
and Welfare (Health)*

G. F. DAVIDSON,
*Deputy Minister of National Health
and Welfare (Welfare)*

Ottawa, Canada.

HEALTH BRANCH

INTRODUCTION

Just as the pattern of our social and economic organization is subject to constant and progressive change, health services ancillary thereto cannot remain static and must also undergo appropriate changes necessary to the needs of the times. Occasionally, revolutionary changes which attract a great deal of interest and attention, or some new and important scientific discovery may mark our progress toward better health services for all. In past years, it has frequently been possible to draw attention in the Annual Report of this Department to such noteworthy milestones as have occurred during the year under report. The fiscal year under this review has not produced much that could be called new or startling in this field. The reports of the various divisions of the Department will, therefore, on superficial reading, appear to present a repetition of previously reported activities.

On closer examination, however, definite changes in emphasis on certain Departmental activities are perceptible. New techniques may be applied to the solution of old and continuing problems. Research into improved methods is constantly proceeding. Establishments are being reduced or developed to meet the changing nature of the functions which they perform. All possible effort is directed to pruning out the outmoded or unnecessary and bringing to a maximum state of efficiency those features required to meet the newer needs.

An example of this process is to be found in an examination of the Department's Immigration and Quarantine Hospital system. For many years, the Department carried heavy responsibilities for the control of communicable diseases at our ports of entry, for the examination and medical care of a constant flow of immigrants, and for the medical care of sick mariners. Substantial hospital facilities were necessary in such ports as Halifax, Saint John, Quebec, and Victoria. With the passage of time treatment and hospital facilities, established and maintained by local authorities, have increased tremendously in both quantity and quality. Improved public health services in many countries in the world and improved reporting of outbreaks of communicable disease through such central agencies as World Health Organization have greatly lessened the risk of importing such deadly diseases as smallpox, cholera and plague into this country. It has been possible, therefore, and the progressive policy of the Department, to reduce these establishments in accordance with the continuing need. During the year under review, the two last and largest of these institutions at William Head and Quebec were closed as quarantine hospitals and converted to more useful purposes. Through arrangements with the provinces and local authorities, standby facilities are available in case of an epidemic of serious communicable disease. The federal-provincial

hospital insurance schemes in effect in most of the provinces and the increased hospital bed capacity available in these localities has eliminated the necessity for maintaining large-scale treatment services.

On the other hand, the almost explosive growth of air travel has created new immigration and quarantine problems. The new inland ports of entry which have appeared in such places as Gander, Dorval, Toronto, Winnipeg, and Edmonton now account for over 30 per cent of immigration traffic. Satisfactory service to the travelling public and safeguarding of the national interest has required much rearrangement of staff and rapid expansion in some classes.

The Dominion Council of Health continues to play a co-ordinating role with respect to the programs of the provincial health authorities and in advising the Minister on all health problems of national scope. In the two meetings of the Council held during the year, consideration was given, among other matters, to the revision of the health section of the Atomic Energy Control Regulations, to problems related to nursing education, to the possible value of attenuated live polio virus vaccine, and to the health aspects of the new Emergency Measures Organization.

As in previous years, a breakdown is appended of the total estimates for the Health Branch for the fiscal year as well as for the preceding year for purposes of comparison. The greatly increased requirements of the Hospital Insurance program have raised the total of this item and General Health Grants from just over 75 per cent to nearly 86 per cent of the total Health Branch expenditure. Other items have remained relatively stable or show slight decreases.

	1959-60	%	1958-59	%
STATUTORY OBLIGATIONS.....	\$ 7,156,123	3.0	\$ 7,168,347	5.2
Quarantine and Leprosy				
Immigration Medical Services				
Sick Mariners Treatment Services				
Public Health Engineering				
Civil Service Health				
Civil Aviation Medicine				
Administration of the Food and Drugs and the Proprietary or Patent Medicine Acts				
Administration of the Opium and Narcotic Drugs Act				
CO-OPERATION WITH PROVINCES.....	2,336,787	0.9	2,180,694	1.6
Laboratory of Hygiene				
Occupational Health				
Special Technical Services				
HOSPITAL INSURANCE PROGRAM.....	160,000,000	66.7	55,000,000	40.2
GENERAL HEALTH GRANTS.....	46,000,000	19.1	48,000,000	35.2
INDIAN AND NORTHERN HEALTH SERVICES.....	23,829,552	10.0	23,748,867	17.4
MISCELLANEOUS GRANTS.....	213,250	0.1	212,450	0.1
NATIONAL HEALTH BRANCH—ADMINISTRATION....	398,299	0.2	366,772	0.3
	<u>\$239,934,011</u>	<u>100.0</u>	<u>\$136,677,130</u>	<u>100.0</u>

1958-59 figures adjusted to conform with revised 1959-60 vote classification.

FOOD AND DRUG DIRECTORATE

General

The protection of the Food and Drugs Act and the Proprietary or Patent Medicine Act extends to every man, woman, and child in Canada. These laws ensure the purity of foods and the safety and effectiveness of drugs and guard the public against health hazards, fraud, deceptive labelling, and misleading advertising.

The organization which administers these Acts has its headquarters at Ottawa. Five regional offices are located at strategic points across Canada and these have their own laboratories and field inspection staff. At headquarters, there are the Research Laboratories, Inspection and Enforcement Services, Administrative Services, and the Director's Staff which includes the Medical Section and the Consumer Relations Section. Protection under the two Acts costs each Canadian about eleven cents a year.

Major reorganization of the Directorate placed the responsibility for planning research, regulatory, and enforcement activities on the Associate Director. Collection of basic statistical data has been started as a first step in program planning, and this includes statistics on the time and the activities devoted by the personnel of the Inspection and Laboratory Services to the various food, drug, and cosmetic commodities. In order to determine the extent of the problems of enforcing the Food and Drugs Act, data and information are being collected on



the population, area, number of food and drug manufacturing plants, and retail sales of the various commodities under the jurisdiction of the Act in each of the regions of the Directorate. From the enforcement standpoint, records are being maintained of the commodities involved in violations, under three broad headings: health hazards including unsanitary conditions, major frauds, and minor violations. Although active programs of

research, regulatory and enforcement work are being carried on now, the basic statistical data being collected are expected to result in a more efficient use of available staff and funds, a more adequate assessment of manpower needs, and a better co-ordination of activities.

Another important development of the reorganization was the division of inspection activities at Ottawa into three units dealing with foods, drugs, and enforcement. The administration of the Proprietary or Patent Medicine Act has

been taken over by the Drug Unit. This change recognized the complexity of Food and Drug work at headquarters and the need to develop specialists in the three fields of activity. At the same time, it took into account the need for a large degree of interchangeability of duties among the members of each unit. There is evidence that the plan is already functioning well.

Changing conditions and new developments in the food and drug industries continue to demand the attention of the Directorate. The co-operation and improvements signalled in last year's report continue unabated, but new problems present themselves almost daily. Consumer dissatisfaction with food labelling, particularly with reference to the declaration of net contents, resulted in a major revision of food labelling regulations. This will have far-reaching effects during the next two years or so, and an immediate result has been an increase of the work and problems associated with the review of food labels, in the regions as well as at headquarters.

A number of surveys were conducted on a national scale. Included in the items studied were peanut butter, with respect to correctness of contents declaration and fill; poultry, for the presence of stilbestrol; boneless poultry products, for meat content; milk, for penicillin residue; and apples, for arsenic residue. Collaborative studies commenced last year were continued and a number of new ones begun. Among the latter were, a study of the dangers from the use of Dieldrin in grasshopper control on the Prairies, work on the development of a simple test to detect narcotic drugs, and the evaluation of a method developed in one of the regions for the determination of crude fibre in cocoa.

In Ottawa, a survey was made of a number of food products in aerosol spray type containers to determine the actual amount of the products recovered in relation to net contents declarations.

Imports must comply with Food and Drug Regulations in the same way as domestic products. Control over Canadian products is exercised by factory inspection and by sampling of commodities at the retail level. Imports are examined on arrival at entry ports. During the year, more than 30,000 domestic samples were analysed or examined and 26,243 visits were made to manufacturing and retail outlets. Included were 4,971 complete inspections of food and drug manufacturing plants.

Publicity south of the border regarding contamination of cranberries by the weed killer aminotriazole had its repercussions in Canada, resulting in considerable work in the examination of berries on the market. Only two small lots were found to be contaminated, and the Canadian cranberry crop was declared safe. A salutary effect of the incident was that it focussed attention on the necessity of proper care in the use of chemicals in connection with food growing.

Reports in the press continue to create a demand in Canada for drugs which are produced in other countries and which are still in the experimental stage. One example was given in last year's annual report and since that time there have been two such additional reports, one involving a polio vaccine, the other a rejuvenating drug. Entry was refused to all three of these drugs for the reasons previously stated, i.e., the manufacturers had not filed information with the Directorate regarding safety and details of manufacturing processes and

controls. Premature reports of this nature cause considerable anguish and disappointment to sufferers whose hopes have been raised only to be dashed again.

As a result of the discovery that injections of dihydrostreptomycin caused deafness in some individuals, this drug in combination with other antibiotics was deleted from existing licences; it may still be used alone in carefully controlled cases at the discretion of the physician.

Market surveys indicated that many sensitivity discs were not up to label potency. New regulations were passed to place them on a release basis: they may not be sold until a sample of each lot has been tested and found satisfactory.

A rather unusual incident was the recall of a hair preparation found to be causing a disproportionate number of allergic reactions.

If acceptance of a new service can be taken as an indication of its need, the poison control program in Canada was indeed badly needed. From the first four centres, opened in May 1957, has grown a chain of centres extending to all the provinces. Sixty-three hospitals have been supplied with the card index system or treatment manual prepared by the Directorate. In addition, on March 1st the Province of Alberta initiated a comprehensive program under which each of the 103 active treatment hospitals in the province was equipped with a poison treatment centre, while Poison Information and Control Centres were established at Edmonton and Calgary. The Directorate continues to act as a central clearing house for the reports made by the various centres and as a source of information on product composition, toxicity, and treatment. In recent months, accidental poisonings were reported at the rate of about 500 a month, a figure which is expected to rise as existing centres report more regularly and new centres open. Since the inception of the program, 8,826 accidents resulting in 19 deaths were reported. It has been found that acetylsalicylic acid tablets figure in nearly 23 per cent of all accidental poisonings and that of these more than two-thirds involve babies' or children's type of tablets. Faced with these statistics, at least one leading manufacturer has adopted a bottle with a safety closure for the packaging of children's acetylsalicylic tablets. From the preventive angle, the best answer to the problem of accidental poisonings is undoubtedly the education of the parents. The Consumer Relations Section has redoubled its efforts in this direction. Copies of booklets and handouts such as "Keep Your Home Free from Poisonings", "Don't Poison Your Family", "If it is not Food it is Poison", and others were distributed to thousands of parents and guardians of small children. Every possible assistance was given to consumer groups and other bodies interested in this problem. This was in addition to the normal work of the section in explaining the function of the Directorate to the public, dealing with an increasing number of consumer enquiries and complaints and fulfilling a number of speaking engagements.

Protection of the Food Supply

Food technology has become an involved science, the complexities of which constantly challenge the Directorate. Whenever industry develops new substances or adapts existing ones for use in food, government scientists are faced with more

research and investigation. Sometimes in the light of new or additional knowledge, it is thought advisable to reverse earlier decisions. This was the case when two food colours were removed from the permitted list.

Safe tolerances for four insecticides on fruits and vegetables were added to the Food and Drug Regulations and safe tolerances were established for residues of certain pesticides in fat or meat.

The safety of chemical additives for foods is under constant study. Their use is permitted only if they are safe under conditions of use and there is a definite need for them which will ultimately benefit the consumer.

Commercial shipments of foods were examined to ensure their compliance with Canadian regulations before being allowed entry into the country. On the domestic side, food plants were inspected; surveys and examinations were made at the retail level; food labelling and advertising problems were discussed with manufacturers or their agents and with consumer groups; and several thousand labels, advertisements, and radio and television commercials were reviewed.

Protection of the Drug Supply

Manufacture and sale of drugs is controlled by the provisions of the Food and Drugs Act and the Proprietary or Patent Medicine Act. Under the Food and Drugs Act, certain drugs may be sold only on prescription; advertising to the public of drugs for the treatment of certain specified ailments is forbidden, and injectable or parenteral drugs such as insulin, vaccines, sera, and those prepared from micro-organisms or viruses must be manufactured under a Canadian licence that is issued only after the premises have been inspected and found satisfactory. Fifty-four firms now hold such licences covering a total of 650 drugs—an increase of 23 drugs over last year. Sixteen of these firms are Canadian; 29 are American; and 9 are European.

During the year, 206 new drug submissions were received from pharmaceutical manufacturers in Canada, the United States, and a number of European countries, or from Canadian distributors of these products. In the same period, 179 new drugs obtained clearance after compliance with the new drug regulations. This number represents a 15 per cent increase over last year which, in turn, was 10 per cent above the previous three-year average. This reflects the greater activity of the pharmaceutical industry in Canada and throughout the world. There is a noticeable trend for foreign manufacturers to appoint Canadian distributors for their drug products who then file the new drug submissions and conduct at least some of the clinical investigation in Canada; this is in addition to the clinical investigations sponsored by Canadian manufacturers.

There were 410 inspections of drug manufacturers and distributors, with special attention being directed to those firms whose control procedures had been determined by previous inspection to be less than the optimum. Continued attention was given to the firms preparing parenteral drugs. A greater proportion of the time this year was spent with drug distributors and in checking imported drugs, the volume of which has increased markedly.

Out of thousands of labels reviewed, 2,128 were found incorrect and were brought to the attention of the manufacturers for revision. In addition, some 743 advertisements and package inserts had to be modified or discontinued.

The Proprietary or Patent Medicine Act is concerned exclusively with secret formula medicines sold under proprietary or trade names. Its control rests mainly on registration before marketing and renewal of registration by annual licence. Formulae and claims are reviewed with the help of medical officers, pharmacologists, and an Advisory Board established under Section 9 of the Act.

The official register now includes 2,970 preparations covered by licences issued to 1,063 manufacturers. This year 248 new products were registered while 89 were refused. Because most of the nationally advertised medicines are registered, special attention is given to commercial publicity. Radio and television commercials for drugs, patent medicines, cosmetics, and devices are under the constant surveillance of the Drug Unit. In the three months after taking over this work on January 1st, 1960, the Unit reviewed 1,570 scripts, a rate which promises to double the figure for last year. The total number of radio and television commercials reviewed this year was about 20,000. The bulk of this work is done by correspondence, but there were 312 interviews with manufacturers or advertising agents.

Legal Actions

Of 86 prosecutions completed, 40 involved foods and 46 resulted from the continuing survey of drug stores in connection with the illegal sale of prescription drugs. This survey is showing results in a lower proportion of cases requiring legal action. Fines levied totalled \$9,105. One firm which sold goods that had been placed under seizure was fined \$500—the value of the seized material. Several prosecutions were instituted for the sale of horsemeat in the form of ground meat or sausage without label declaration. With the co-operation of the Department of Agriculture, several firms were prosecuted for selling adulterated butter. In one case a fine of \$1,400 was levied.

There were 130 seizures of goods to an estimated value of more than \$130,000. Articles which could not be brought into compliance by reprocessing or relabelling were destroyed.

Investigation and Research

Emphasis in the central laboratory in Ottawa is on research and the development of techniques and methods of analysis for foods, drugs, and cosmetics. The regional laboratories in Halifax, Montreal, Toronto, Winnipeg, and Vancouver are mainly concerned with examining products for enforcement purposes. Collaborative studies on methods are undertaken both at Ottawa and in the regional laboratories and, in the latter, periodical surveys of special groups of products are carried out.

Eleven sections, each headed by an expert in his particular field, make up the central laboratory and an animal colony is maintained to supply the necessary test animals. The investigations carried out in the various sections during

the past year have resulted in a total of 54 publications in scientific journals. This work has attracted the attention of research workers from other countries and six of them received training in, or took part in the work of, the laboratory. Two of these scientists held National Research Fellowships, one a Colombo Plan Fellowship, two were sponsored by national governments and one had been awarded a World Health Organization Fellowship. A brief review of the activities of the individual units is given in the following section.

A number of laboratory scientists are assisting the Association of Official Agricultural Chemists in developing new official methods of analysis.

Animal Pathology

Post-mortem examinations were performed on 699 animals, the majority of which were on specific tests, and 6,436 sections of animal tissue from 10 separate projects were examined microscopically. Methods for the improvement and maintenance of the health of the animal colony are under constant review.

The use of an electronic blood cell counter was introduced to aid in assessing the effects of food additives and drugs on the blood of experimental animals. Several liver function tests were studied and suitable tests adopted for use in chronic and acute toxicity studies. A liver function test on a micro scale was developed.

Biometrics

This section acts as a consulting and service unit for statistical problems throughout the Directorate. During the year, designs for 16 experiments were drawn up to assist in assessing feeding tests and chemical testing procedures or techniques. Statistical analysis was carried out on 31 sets of data to test the relationships between various factors in each set. Statistical problems related to work done in other sections within the Directorate were studied, and assistance was given research workers in applying or interpreting statistical methods in relation to their experiments. A study was begun of the control exercised by the manufacturer in filling various packaged or canned goods as well as a study of quality control in the production of jams.

Biophysics Section

A survey of the residual radio-activity in a variety of Canadian foods due to fallouts has been initiated. This survey is aimed at obtaining a distribution pattern of the amount of radio-activity observed in various types of food found on the Canadian market. The study of the effect of radiation on biological material and chemical compounds was continued and a method was developed for stabilizing, at room temperature, the free radicals produced by radiation. With this method, the presence of free radicals was detected in a number of irradiated barbituric acids, amino acids, essential oils, and dyes. Some 190 samples were analysed in the X-ray diffraction laboratory.

Cosmetics and Alcoholic Beverages

A number of consumer complaints relating to various types of cosmetics were investigated and methods of analysis were developed for abrasives and other constituents in dentifrice products. A comprehensive survey on gin was carried out which resulted in amendments to the regulations for Hollands gin. Methanol in cider was the subject of a collaborative study with the Department of Agriculture. Analytical methods for colour added oranges were developed for the regional laboratories.

Food Chemistry

Considerable progress has been made in the use of gas-liquid partition chromatography as it applies to problems in food research and more particularly in the determination of the composition and adulteration of flavouring materials. Approximately 100 peppermint, spearmint, and other similar oils have been examined. This technique is also being used for the determination of the fatty acid composition of fats and oils. A differential infra-red technique has been developed which will detect the presence of a hydrogenated fat or oil as an adulterant in butter. Studies on the fractionation of the triglycerides of fats and oils on a silicic acid column have been carried out.

Methods for the detection of filth in foods are being improved and methods are being developed for the extraction and determination of sorbitol, mannitol and dulcitol in foods. Methods for the detection of adulterants in vanilla and maple syrup have been examined and collaborative studies carried out. Six methods for the determination of pesticide residues and for the removal of extraneous material from plant extracts have been prepared for the use of our regional laboratories.

Microbiology

A study was made of the possibility that health hazards might result from new methods of processing foods or from a changing microbial ecology.

The use of chlortetracycline as a preservative in commercial poultry was studied under Canadian conditions. There was no evidence of increased hazard due to the bacteria and yeasts that were studied after this treatment. The number of *Salmonella* was observed to be much higher in poultry not treated with chlortetracycline. No antibiotic-resistant salmonellae were isolated. An analysis of *Salmonella* in egg products points to the desirability of pasteurization or other microbial control.

An investigation was conducted on factors contributing to the presence of staphylococci in cheese. These include contamination of the milk from mastitic cows, inadequate cooling, antibiotic residues in the milk, along with resistant *Staphylococcus*.

Resistance of bacteria to gamma irradiation was studied. Radiation resistant strains of bacteria developed in some cases and not in others. Resistance has persisted for more than one year and is presumably of genetic origin.

The fractionation of toxins of various cultures of staphylococci continues. Descriptions of distinctive lysins and a newly recognized dermenocrotic toxin were published.

Organic Chemistry

There is a primary need for a systematic method to identify the increasing number of synthetic drugs related to morphine which are being brought under international and national narcotic control.

As part of the development of such a method, paper partition chromatographic methods for 90 synthetic narcotics, 30 antihistamines, 10 central nervous system stimulants, and miscellaneous alkaloids were studied. A chapter in a book dealing with methods of isolation, identification, estimation, and biological transformation of 422 alkaloids and related bases for toxicological purposes was written for publication. Methods for quantitative assay of alkaloids in opium to determine the country of origin were studied. Intensive research was carried out on the analysis of essential oils and their constituents by means of infra-red, ultra-violet, and gas-liquid chromatography.

Pharmaceutical Chemistry

Methods were developed for the determination of barbiturates alone and in combination with acetylsalicylic acid or aminophylline. Non-aqueous titration and spectrophotometric techniques were involved. Non-aqueous titration was also used in the analysis of a number of antihistamines. Work was done on techniques for characterizing and analysing promazine and chlorpromazine, two of the most common tranquillizers. Studies were carried out on the variability of compressed tablets with respect to weight, potency and disintegration time and a test to determine the uniformity of distribution of active ingredients in tablets was applied successfully to sulfonamides. Consumer complaints questioning the potency of a variety of pharmaceuticals were investigated. A training program in drug analysis was established for government analysts from Jamaica and Trinidad.

Pharmacology and Toxicology

Studies involving a method developed in this laboratory for the detection of agranulocytosis-producing drugs were continued. Morphine and penicillin produced negative results while thiouracil and chloramphenicol depressed the bone marrow and lowered the white cell count, which agrees with clinical experience. Work was also done on the detection of incipient tumors. Studies of possible toxic properties were completed for citral from citrus fruit and similar studies were continued for the food colours, Erythrosine, Fast Green, and Ponceau 3R.

Experiments with radio-active phosphorous suggest that metabolic activity is increased in rats by feeding aramite, a herbicide which has been shown to cause liver tumors in test animals. It seems unlikely that there is any direct relation between the observed effect and the reported carcinogenic action of aramite.

An improved assay procedure for proteolytic enzymes has been developed in collaboration with the Committee of the National Formulary. Progress has been made in the development of a new chromatographic method for dextran analysis.

The release of hormones from the pituitary gland by the action of various drugs, especially nicotine and lobeline, was carried out. In many respects the action of lobeline is the same as that of nicotine. The effect of tolbutamide on skin sugar was studied to ascertain if possible its relationship with the treatment of acne.

Physiology and Hormones

Studies of the biological activity of desiccated thyroid were conducted in collaboration with the Pharmaceutical Manufacturers' Association of the United States. It was found that the thyroid preparation obtained from pork was more active than that from beef. Chemical analysis has been undertaken in an attempt to explain this apparent physiological difference.

Factors such as environment, strain of test animal, and methods of extraction have been studied in connection with the *in vitro* assay for corticotrophin in which steroidogenesis in quartered rat adrenals is measured. An *in vitro* assay procedure has been developed for determining micro-quantities of insulin. This involves the stimulation of glycogen formation in the isolated rat diaphragm muscle. Chemical and biological assay of toxic shellfish extract was continued.

Vitamins and Nutrition

No satisfactory *in vitro* method for determining the rate of release of vitamins and other drugs in special types of pills, capsules, etc., has been developed. Therefore, the rate of release of these products was studied in human subjects.

A screening procedure, using micro-organisms, has been developed and tested for the determination of the interference caused by certain drugs in the metabolism of vitamins.

The criterion developed last year for the evaluation of the protein rating in foods has helped in regulating advertising and labelling claims. An improved method for the determination of niacin in cereals has been proposed and is being tested.

Studies of the nutritional value of rapeseed oil, produced in Western Canada, indicated that it could be used in moderate amounts in foods without harmful effect.

Studies have been continued on the isomerization of various forms of vitamin A found in oils and pharmaceuticals to aid in understanding the function of vitamin A and in determining the validity of existing assay methods.

INDIAN AND NORTHERN HEALTH SERVICES DIRECTORATE

The purpose of this Directorate is to provide or arrange essential medical treatment for any registered Indian or registered Eskimo who requires assistance beyond local resources; to ensure that an appropriate public health program covers each reserve or native community; and, in the northern territories, to carry out any activity in the health field which is approved and supported by the governments of the respective territories.

Administrative Organization

There were 180,000 registered Indians and 11,500 registered Eskimos scattered throughout the ten provinces and in the two northern territories. In addition, the non-registered population of the Northwest Territories was approximately 8,500 and in the Yukon Territory 11,500. The co-ordinating head office is in Ottawa with five regional offices covering areas which take into account population groups and practical communication routes. The regions are subdivided into zones which frequently centre on a directorate hospital or sub-office. The organization by regions and units is depicted in Tables 1 and 2.



Personnel

The establishment contained 2,336 positions. These included 106 medical officers, 20 dental officers, 605 graduate nurses and 34 administrative officers. Among the remainder were the wide variety of specialists, medical and administrative classification which, working in close co-operation, are essential to the effective promotion of a combined treatment and public health program.

Fiscal Management

The appropriation of some \$21 million for operations and maintenance was allotted to the regions in proportion to their commitments and was controlled in



the main by those offices. Some use regional treasury offices while other accounts are settled in the central pay office. The appropriation of some \$3 million for new construction and new equipment was controlled largely from the head office having regard to regional estimates of requirements.

Facilities

The Directorate co-ordinated 162 units which covered the whole range

between purely administrative offices (10), through hospitals (22), clinics independent of hospitals (15), and nursing stations (35), to health centres which did not undertake definitive care (80). Some 103 of these were Directorate-managed with the remainder in accommodation provided by some other department.

There were brought into operation during the year, a 120 bed hospital (Whitehorse, Y.T.), 2 nursing stations (Povungnituk, P.Q. and Fort Liard, N.W.T.), a doctor's residence (Pangnirtung, Baffin Island), and 7 health centres (2 in Saskatchewan, one in Manitoba, one in the Mackenzie, one in B.C., and 2 in the Yukon Territory). The Directorate-managed units received appropriate maintenance and improvements.

Food Service Supervision

Acquiring a principal dietitian in 1959, the Directorate was able to improve the food service in departmental hospitals and to commence advice to the residential schools managed by Indian Affairs Branch.

Management (Audit and Review)

Senior officers of the head office, at region and zone levels visited as the occasion required, those units having need of assistance in management of the Directorate's programs as they were applied to the different groups and areas receiving attention. An improved system for maintaining individual health records at the community level was introduced. Both procedures stimulated improved efficiency within the Directorate.

Staff Improvement

In-service training was active for both medical and administrative elements. The latter had a particularly heavy program because of the impact of hospital insurance in eight provinces wherein Indians had not been covered previously. Education leave was completed by four medical officers, 17 graduate nurses, and one hospital administrative officer. Many attended courses of less than the usual academic year. Officers of various disciplines attended appropriate conferences and conventions and material emanating from these activities or especially prepared

was distributed throughout the service. The Directorate continued to participate in programs where medical, nursing, and physiotherapy students came for a period of experience and Indian girls were screened to assess their suitability as student practical nurses.

Co-operation with Other Agencies

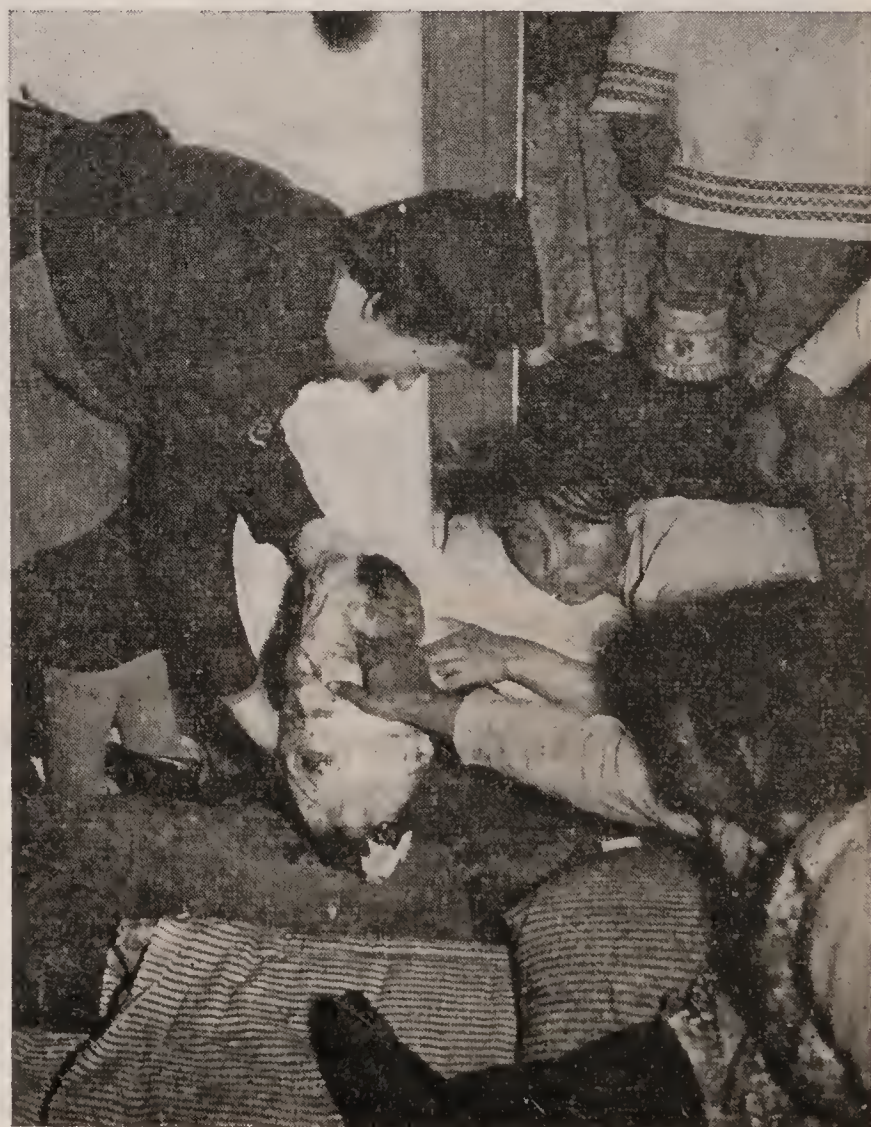
The closest working arrangements were maintained with Indian Affairs Branch and Northern Administration Branch, the administrative agencies for Indian and Eskimo affairs respectively. There was constant liaison with other divisions of this department, especially Public Health Engineering, Nutrition, and the Laboratory of Hygiene and with northern elements of the Royal Canadian Mounted Police, the Royal Canadian Air Force, and the Department of Transport. There has been heavy dependence on the Department of Public Works because of the variety and distribution of the units which the Directorate establishes and maintains. Provincial, municipal, native, and voluntary organizations assisted in the many ramifications of medical care, all accepting the inevitable integration of health resources and facilitating a smooth transition in that direction.

Public Health and Treatment Services

The Directorate conducted an integrated program covering community public health, home visits, and arrangements for required treatment either in Directorate facilities or appropriate institutions, some of which were compensated through agreed rates or by the payment of premiums in areas served by this type of insurance plan. Similarly, the medical, dental, and nursing resources were augmented by arrangements with local, community, or provincial practitioners.

The birth rates continued to be approximately double that for the total Canadian population. The death rates were proportionately high. This was conspicuous among the very young where the rates were three to six times that for the population as a whole with the higher rates being associated with the more primitive and rigorous environmental conditions.

Graph 1 shows the most common causes of death and the changes in relationship which have occurred over an eight-year span. The trend has been towards the relationships found in more sophisticated populations. The net effect of natural increase less natural loss plus loss due to enfranchisement would appear to be an increase of population of about 2 per cent.



Maternal and Child Health Program

Maternal loss has been agreeably low but the infant mortality has warranted concentration of attention in this area. Programs of instruction, guidance in use of food, and use of dietary supplements to mothers and children were stressed.

Tuberculosis Control Program

In spite of rapidly falling death rates (40 per 100,000 for registered Indians 1958), the amount of active disease remained many times that in the general population and continued to be a major concern of the Directorate. Table 3 shows some of the anti-tuberculosis activities during 1959.

Treatment Services

Continued attention was given to the wide range of activities which sometimes precede and commonly lead on to actual treatment. These included the control of communicable diseases; improvements in environment and nutrition along with programs which combine survey, case finding, and treatment in the areas of dental and mental health; improvement in eye, ear, nose, and throat conditions; the laboratory services which assist in diagnosis, treatment, and continued observation; and finally the part which a medical service can play in rehabilitation.

In addition to the resources of the Directorate and the neighbouring communities, extensive use was made of the more ample resources of the large medical centres when such were indicated in any instance which fell within the Directorate's scope. Medical concern with Indians and Eskimos has included the transportation to the treatment centre and return home. Arrangements for transportation of residents of the northern territories were made with the appropriate agency accepting the charges.

At the community level, much use has been made of persons of various degrees of training who have supervised the simple medicines made available to each native group. These lay dispensers have been the first line of defence against disability because when their own skills are exhausted they are alert to calling in professional advice.

Research

It has been most practical to observe the advances made by agencies better equipped to carry out formal research but in the areas of tuberculosis control, nutritional deficiency, and congenital dislocation of the hip, the Directorate's officers have been in a good position to make significant even though minor contributions to the general fund of knowledge.

TABLE 1

I.N.H.S. FACILITIES BY REGIONS, DECEMBER 31, 1959

I.N.H.S. Region	Province	Facilities						
		Hospitals			Clinics	Nurs. St'ns.		Health Centres
		No.	Rated Cap.			No.	Rated Bed Cap.	
			Beds	Bass.				
Eastern	Nfld.....							
	N.S.....				1	1	4	1
	P.E.I.....							1
	N.B.....							3
	P.Q.....				1	6	24	11
	Ont.....	3	213	17	5			20
	N.W.T.....	1	13	5	2	2	8	
	Totals.....	4	226	22	9	9	36	36
Central	Ont.....	1	72	2	1	4	16	5
	Man.....	5	452	20	4	11	44	6
	N.W.T.....					1	4	
	Totals.....	6	524	22	5	16	64	11
Sask.	Sask.....	2	154	13	3	1	4	10
Foothills	Alta.....	6	604	25	2	3	14	8
	B.C.....							
	Yukon.....	1	102	15	1			4
	N.W.T.....				4	8	35	2
	Totals.....	7	706	40	7	11	49	14
Pacific	B.C.....	3	562		6			12
Grand Totals.....		22	2,172	97	30	37	153	83

GRAPH 1: SELECTED CAUSES OF INDIAN MORTALITY BY RANK, 1951-1958

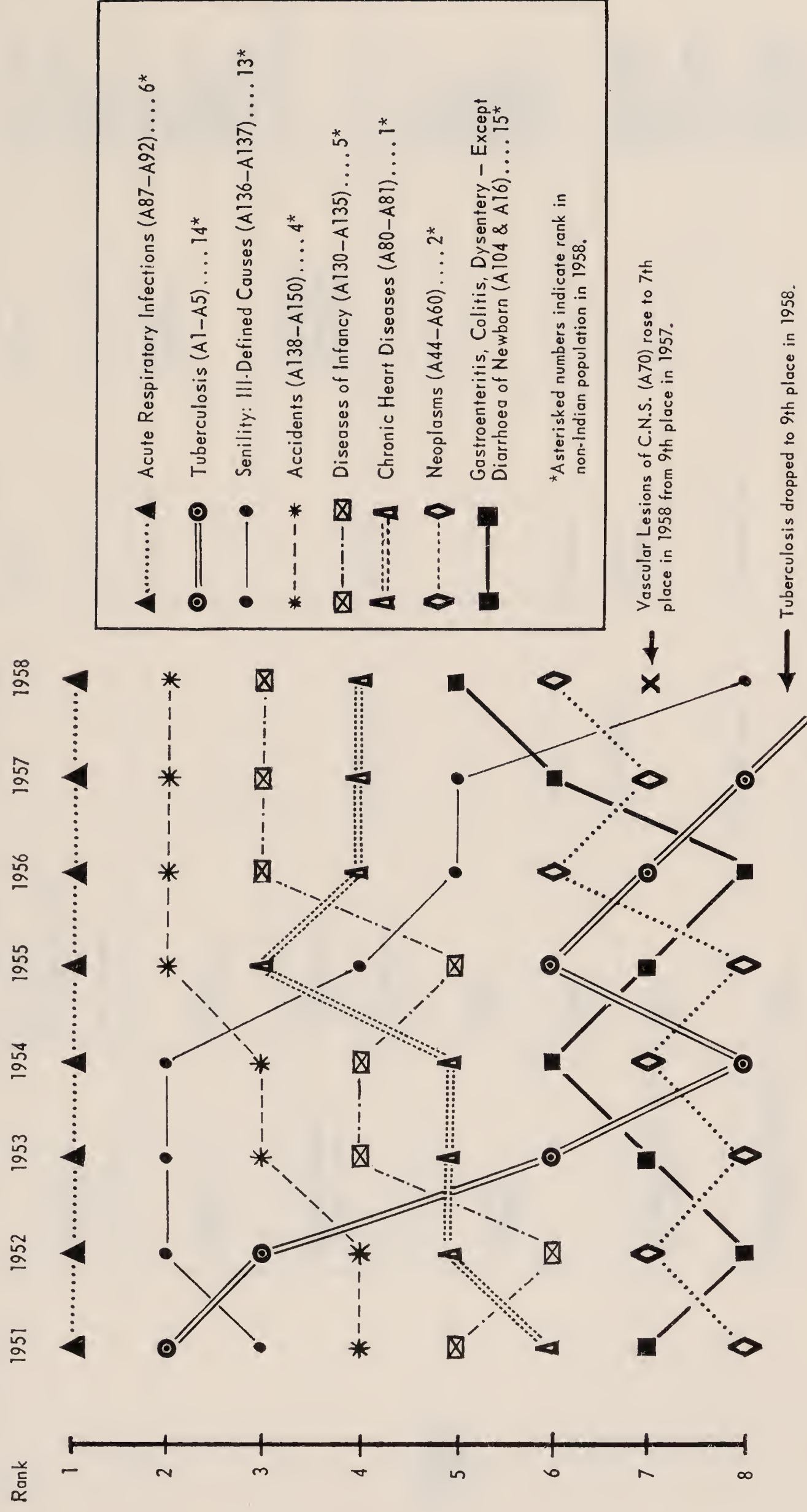


TABLE 2

I.N.H.S. FACILITIES BY REGION, ZONE, AND PROVINCE

ADMINISTRATIVE AREAS			I.N.H.S. FACILITIES			
Region and Regional Office	Zone and Zone Office	Province	Hospital	Clinic	Nursing Station	Health Centre
EASTERN (Ottawa)	ATLANTIC (Amherst)	Nova Scotia		Sydney	Eskasoni	Shubenacadie
		Prince Edward Island				Lennox Island
		New Brunswick				Big Cove Chatham Kingsclear
	QUEBEC (Quebec City)	Quebec (Northeast)		Caughnawaga	Bersimis Fort Chimo	Mingan Oka Pointe Bleue Restigouche Romaine Schefferville Seven Islands
		Quebec (Northwest)			Fort George Port Harrison Povungnituk Rupert House	Great Whale River
	MOOSE FACTORY (Moose Factory)	Ontario (Northeast)	Moose Factory	James Bay		Fort Albany
	OTTAWA (Ottawa)	Quebec (West)				Amos Maniwaki Manowan Mistassini Obedjiwan Rapid Lake St. Regis Waswanipi
		Ontario (East)		Desoronto		
	SOUTHERN ONTARIO (Ohsweken)	Ontario (South)	Lady Willingdon	Muncey Ohsweken		Chippawa Hill Christian Island Kettle Point Orillia Peterborough Walpole Island
	NORTHERN ONTARIO (North Bay)	Ontario (North)	Manitowaning	Manitowaning		Chapleau Parry Sound Sault Ste. Marie Sturgeon Falls Timiskaming
	EASTERN NORTHERN (Frobisher)	Northwest Territories (Franklin District)	Frobisher Bay	Frobisher Bay Pangnirtung	Cape Dorset Foxe	

I.N.H.S. FACILITIES BY REGION, ZONE, AND PROVINCE—Continued

ADMINISTRATIVE AREAS			I.N.H.S. FACILITIES			
Region and Regional Office	Zone and Zone Office	Province	Hospital	Clinic	Nursing Station	Health Centre
CENTRAL (Winnipeg)	SIoux LOOKOUT (Sioux Lookout)	Ontario (Northwest)	Sioux Lookout	Sioux Lookout	Lansdowne House Pikangikum Sandy Lake Trout Lake	Fort Frances Kenora Nakina Pickle Lake Port Arthur
	SOUTHERN MANITOBA (Winnipeg)	Manitoba (South)	Assiniboine Fisher River Fort Alexander	Fisher River Pine Falls	Little Grand Rapids Little Saskatchewan	Berens River Brandon Dauphin Portage la Prairie Sandy Bay
	NORWAY HOUSE (Norway House)	Manitoba (East)	Norway House	Norway House	Cross Lake Garden Hill God's Lake Narrows Oxford House St. Theresa Point	
	THE PAS (The Pas)	Manitoba (North)	Clearwater Lake	The Pas	Lynn Lake Nelson House Pukatawagan Split Lake	Churchill
	CENTRAL NORTHERN (Winnipeg)	Northwest Territories (Keewatin District)			Baker Lake	
SASKATCHEWAN (Regina)	FORT QU'APPELLE (Fort Qu'Appelle)	Saskatchewan (South)	Fort Qu'Appelle	Fort Qu'Appelle		Broadview Kamsack Punnichy Rose Valley White Bear
	NORTH BATTLEFORD (North Battleford)	Saskatchewan (West)	North Battleford	North Battleford		Meadow Lake Onion Lake
	PRINCE ALBERT (Prince Albert)	Saskatchewan (East)		Prince Albert	Pelican Narrows	Fort a la Corne La Ronge Shellbrook

FOOTHILLS (Edmonton)	CHARLES CAMSELL (Edmonton)	Alberta (Edmonton Agency)	Charles Camsell	Edmonton		Bonnyville Calgary Driftpile Fort Chipewyan Fort Vermilion High Prairie Rocky Mountain House Wabasca
	ALBERTA (Edmonton)	Alberta (Except Edmonton Indian Agency)	Blackfoot Blood Hobbema Peigan Stony	Hobbema	Goodish Lake Hay Lake Saddle Lake	
	MACKENZIE (Edmonton)	Northwest Territories (MacKenzie District)		Aklavik Fort Simpson Fort Smith Rae	Cambridge Bay Coppermine Fort Good Hope Fort Liard Fort McPherson Fort Norman Inuvik Tuktoyaktuk	Fort Resolution Yellowknife
	YUKON (Whitehorse)	Yukon	Whitehorse	Whitehorse		Dawson Haines Junction Mayo Watson Lake
	COQUALEETZA (Sardis)	British Columbia (South)	Coqualeetza	Alexis Creek Sardis Vancouver Williams Lake		Kamloops Lillooet Pemberton
	NANAIMO (Nanaimo)	British Columbia (West)	Nanaimo	Nanaimo		Alert Bay Bella Bella Duncan Tofino
PACIFIC (Vancouver)	MILLER BAY (Miller Bay)	British Columbia (North)	Miller Bay	Miller Bay		Aiyansh Hazelton Masset Port Simpson Vanderhoof

Revised May 16, 1960, by:
Statistics Section,
Indian and Northern Health Services,
Department of National Health and Welfare.

TABLE 3
ANTI-TUBERCULOSIS ACTIVITIES
Calendar Year 1959

Region	Category of Persons	Population (1)	Number of X-Rays Taken			Number of Active Cases Discovered						Number of Cases Discovered by Surveys Hospitalized Before January 1, 1960	Number of B.C.G. Vaccinations (2)
			On Field Surveys	On School Surveys	On All Surveys	Diagnosed for First Time	By Field and School Surveys			By Other Means	Grand Totals		
							Previously known	Totals					
Eastern	Indians Eskimos	60,000 6,800	12,414 4,083	6,533 4	18,947 4,087	51 70	21	15 10	56	143 80	89 68	1,200 8	
	Totals	66,800	16,497	6,537	23,034	121	21	25	56	223	157	1,208	
	Central	Indians Eskimos	35,000 1,800	20,951 663	3,834	24,785 663	55 6	11	65 2	69 9	200 17	123 8	508
Totals		36,800	21,614	3,834	25,448	61	11	67	78	217	131	508	
Saskatchewan		Indians	23,000	14,873	2,462	17,335	7		3	104	114	10	1,070
Foothills	Indians Eskimos	26,000 3,000	13,581 1,707	3,892 308	17,473 2,015	41 10	12 2		144 16	197 28	53 12	1,731 187	
	Totals	29,000	15,288	4,200	19,488	51	14		160	225	65	1,918	
	Pacific	Indians	36,000	11,894	4,570	16,464	29	3	16	93	141	34	1,605
Totals	Indians Eskimos	180,000 11,600	73,713 6,453	21,291 312	95,004 6,765	183 86	47 2	99 12	466 25	795 125	309 88	6,114 195	
	Totals	191,600	80,166	21,603	101,769	269	49	111	491	920	397	6,309	

(1)—Estimated distribution by regions. Estimates for Labrador have been included under Eastern Region and in totals for Indians and Eskimos.
(2)—Repeats included with first vaccinations.

HEALTH SERVICES DIRECTORATE

INTRODUCTION

The Directorate of Health Services includes:

- (a) The office of the Director,
- (b) Four main sections, each of which is headed by a Principal Medical Officer,
- (c) A number of consultant divisions covering special health fields.

Authority for the various responsibilities of the Directorate is derived from:

- (1) The general provisions of Section 5 of the Department of National Health and Welfare Act,
- (2) Specific Acts of Parliament, including—
 - (i) Atomic Energy Control Act
 - (ii) Blind Persons Act
 - (iii) Fisheries Act
 - (iv) Health Insurance and Diagnostic Services Act
 - (v) Public Works Health Act.

Authority for the operation of the National Health Grants Program is provided under the terms of the Annual Appropriations Act.

A well defined block of functions assigned to the Directorate of Health Services covers an area in which improvement in the quality and availability of health services is of primary importance in the interests of preserving and promoting the health of the people of Canada. An effort is made to carry out these functions by direct action, by co-operation with other units of the Department, by co-operation with other federal agencies, or by co-operation with provincial health authorities, as appropriate. The Directorate's responsibilities also include co-operation with other countries through such agencies as the World Health Organization, the Colombo Plan, and the International Joint Commission.

A detailed account of the activities of the various sections and divisions during the past year is given under the appropriate headings in the pages which follow. Of particular interest has been the extension of the hospital insurance and diagnostic services program, which now covers nine of the ten provinces; the revision of the health section of the Atomic Energy Control regulations; the establishment of a comprehensive national program to determine the levels of radio-active fallout in various components of the food chain and their effect on the incorporation of certain fission products in man; and the extension of the Directorate's responsibilities in the area of emergency health services.

ENVIRONMENTAL HEALTH AND SPECIAL PROJECTS

This unit provides over-all direction to those divisions of the Department engaged in environmental health activities, namely, the Divisions of Occupational Health, Public Health Engineering and Radiation Protection. A similar arrangement exists, under Special Projects, with regard to the Medical Rehabilitation and

Disability Advisory Service Division. In addition, under Special Projects, various health subjects of an unusual or specific nature also receive consideration from time to time.

During the past year, the Principal Medical Officer, Environmental Health and Special Projects, again represented Canada on the United Nations Scientific Committee on the Effects of Atomic Radiation. The January 1960 session of this Committee was of special interest since it included discussion of the Canadian-initiated resolution of the General Assembly which called for further studies and international co-operation concerning the effects on man of atomic radiation.

In supporting the Department's radiation protection program, the Principal Medical Officer contributed, during 1959-60, to a number of seminars, panels, symposia or conferences concerned with the safe use of ionizing radiations in medicine, industry and research. Among these were the International Labour Conference which he attended as a technical advisor to deal with an item concerning the "protection of workers against ionizing radiations", a seminar by the World Health Organization on the health aspects of radio-active waste disposal and a conference held by the Food and Agriculture Organization dealing with radio-active materials in food and agriculture. As a member of the Main Commission of the International Commission on Radiological Protection, the Principal Medical Officer was also engaged in the studies of that organization.

During the past fiscal year, as Chairman of the Advisory Committee on the Biological Effects of Radiation, the Principal Medical Officer was called upon with increasing frequency to co-ordinate the flow of technical information between various professional and scientific groups in Canada and international organizations concerned with the effects of ionizing radiations. There was also an increase in the number of requests for information from groups and individuals among the general public.

During 1959-60 the unit assisted in the drafting of health and safety regulations made under the authority of the Atomic Energy Control Act. Consideration was also given to proposals which would provide a greater measure of supervision of the various applications of X-rays to ensure their safe use.

HEALTH INSURANCE

During the year under review, three agreements were signed in accordance with the provisions of the Hospital Insurance and Diagnostic Services Act. On June 27, 1959, an agreement was made with New Brunswick and on July 20, 1959, an agreement was concluded with Prince Edward Island. The programs pursuant to these agreements, were inaugurated on July 1, 1959 and October 1, 1959, respectively. On March 28, 1960, an agreement was also concluded with the Northwest Territories in accordance with an Ordinance passed by the Northwest Territorial Council in July 1959. The program in the Territories was planned to commence on April 1, 1960.

A number of existing agreements with participating provinces were amended during the course of the year, extending the hospital insurance programs in these provinces. For the most part, the extensions in the scope of programs for which

provision was made in the amendments to the agreements, related to a broadening of out-patient services in a number of provinces. There was also some extension of in-patient services into the chronic field, an area which is still somewhat limited in a number of provinces.

The Federal Government maintained a steady flow of federal advance payments on contributions. To achieve this method of expeditious payment of large sums of money, close collaboration was maintained with the representatives of the Comptroller of the Treasury both at the federal and provincial levels of government. Provincial claims for advances were submitted in accordance with established procedures and a minimum of delay was experienced in forwarding payments, upon the receipt of provincial claims.

During the course of the year under review, advance payments in the amount of \$149 million were made to participating provinces. As at the end of the year under review, nine provinces were receiving advance payments in respect of federal contributions in accordance with agreements under the Hospital Insurance and Diagnostic Services Act.

The number of persons covered in these provinces, totalled approximately 12 million persons or 67 per cent of the population. Since residents who are entitled under law to benefits similar to those provided under the Hospital Insurance and Diagnostic Services Act, are not entitled to insured services, residents who are members of the Armed Forces or the Royal Canadian Mounted Police, are not covered by the provincial hospital insurance programs.

The tradition of close federal-provincial co-operation in the field of hospital insurance, which pre-dates the operation of programs, continued to be evident during the year under review. In April 1959, a fourth technical conference on hospital insurance was held in Ottawa and was attended by over 90 persons representing all the provincial governments, a number of federal departments with special interest in hospital insurance, as well as departmental representatives from the Directorate of Indian and Northern Health Services, the Research and Statistics Division, the Legal Division, and several sections of the Directorate of Health Services. A representative of the Canadian Hospital Association also attended. The highlight of this eminently successful conference was the presentation of a number of papers related to the subject of quality controls and, in particular, to a presentation by Dr. Vergil Slee, the Director of the Commission on Professional and Hospital Activities Inc., of Ann Arbor, Michigan, on the subject of medical audit.

While the large attendance at the technical conferences reflected the active interest of the provinces in joint consultation, it also precluded the type of discussion which may only be achieved in a body of considerably more modest dimensions. It was recognized, however, that the device for federal-provincial exchange of views was one which should be maintained to the mutual benefit of all concerned. For this reason, the Minister of National Health and Welfare, with the concurrence of his Cabinet colleagues and the agreement of the provincial ministers, established a permanent Advisory Committee on Hospital Insurance and Diagnostic Services.

Among the terms of reference of the Advisory Committee, are the following:

"The Committee shall discharge, carry out and perform such duties, powers and responsibilities as are necessary to assist and advise the Minister of National Health and Welfare in connection with the administration of the Hospital Insurance and Diagnostic Services Act, the agreements thereunder and all other matters properly related to an effective and efficient hospital insurance program in Canada. The Advisory Committee or any Technical Sub-Committee may make special studies, examinations or investigations, consult with such persons as may be necessary and generally undertake all matters and things as will lead to the best development in Canada of the hospital insurance program."

The provinces were invited to name not more than two representatives as members of the Advisory Committee, whose chairman is the Director of Health Services and co-chairman is the Principal Medical Officer, Health Insurance. The Deputy Minister of Health is an ex-officio member while the chairmen of sub-committees are also members of the Advisory Committee.

As in the case of the Advisory Committee itself, the provinces were invited to name representatives to the sub-committees which include sub-committees on Quality of Care, Research and Statistics; Residence and Uniformity of Benefits; and Finance and Accounting. In the main, the members of the Advisory Committee are the responsible executive officers of the provincial authorities while the members of the sub-committees are technical experts on the staffs of the provincial authorities.

The first meeting of the Advisory Committee on Hospital Insurance and Diagnostic Services was held early in November 1959 in Ottawa. This meeting was preceded by the first meeting of the Sub-committee on Quality of Care, Research and Statistics under the chairmanship of the Director of the Research and Statistics Division of the Department of National Health and Welfare.

As a result of these meetings, a working party of the Sub-committee has been set up with a view to studying and recommending methods for standardizing provincial data in order to facilitate the utilization of such data on a comparable basis on a national level.

The Sub-committee on Residence and Uniformity of Benefits has not met yet as a formal sub-committee of the Advisory Committee. However, this group, under the chairmanship of the Legal Advisor, Department of National Health and Welfare, had been meeting in connection with the technical conferences and had already dealt with a number of problems particularly those pertaining to the status of insured persons who change their place of residence from one participating province to another. It is in large measure due to the work of this group, that all provinces now ensure that a resident of one participating province does not suffer a break in coverage due to waiting periods for benefits in another participating province, when he moves his place of residence.

The Sub-committee on Finance and Accounting has not yet met as a formal group. However, prior to the establishment of the Advisory Committee, discussions of finance and accounting problems had been held at the technical conferences.

Considerable public interest in details of the Canadian program continued to be shown throughout the year, both from members of the press and specialists in the health insurance field. This interest was particularly evident among residents of the United States where the subject of health insurance for older citizens has been debated during the course of the year. Members of Health Insurance have assisted in the preparation of informational material and have participated in discussion groups relating to a number of technical areas in the hospital insurance field. The Principal Medical Officer, Health Insurance, addressed the Annual Meeting of the Canadian Hospital Association, and participated in the proceedings of a hospital insurance seminar in the Maritimes, while the Assistant to the Principal Medical Officer addressed a wide variety of groups and also participated in panel discussions. Other members of the staff were also engaged in some aspects of what might be termed public relation work both in Canada and in the United States. An exhibit on hospital insurance in Canada which was shown at the Annual Meeting of the American Public Health Association in Atlantic City, New Jersey, was awarded first prize among the scientific exhibits on display.

At the end of the year under review, the concluding work was being carried out in relation to final contributions to the provinces for 1958. In this connection, an amendment was made to the Hospital Insurance Regulations, the only amendment made to the federal law during the year under review.

NATIONAL HEALTH GRANTS ADMINISTRATION

The 1959-60 fiscal year was again one of change and adjustment in the National Health Program. With the start of the Federal Government's financial participation in the costs of hospital insurance in five provinces on July 1, 1958, and four more provinces in 1959, a detailed review of all projects receiving assistance through the grants program was carried out, as required by the relevant acts and regulations. This was to eliminate any possible duplication of financial assistance from two sources within the Federal Government.

New Developments

As a result of these reviews, the provinces were enabled to place a desirable emphasis on health services not related to the care of general hospital in-patients. Preliminary planning carried out in 1957-58 and continued in 1958-59 and 1959-60 permitted the provinces to undertake a further expansion and strengthening of their health services, particularly in such areas as the training of additional staff, the immunization of large segments of the adult population against poliomyelitis, the strengthening of their specialized consultative services to hospital programs, the broadening of their attack on mental illnesses, a new approach to tuberculosis control through mass tuberculin testing, the encouragement of re-

search into the causes and treatment of diseases of the heart and arteries, and the development of home care programs designed to keep people out of hospitals and to reduce their length of stay there.

These changes in the utilization of the federal health grants again demonstrated the adaptability of the grants in meeting changing circumstances and in providing support for new and desirable developments in provincial health services.

As in previous years, consultants in the various special divisions of the Department continued to provide assistance in the review of both new and continuing health grant projects. These activities and information on the impact of the grants program on these special fields of interest are described in detail in other sections of this report.

Changes in the Grants

No major changes occurred in the legal or administrative structure of the grants program for the fiscal year 1959-60. Studies were continued to ascertain what changes, if any, may be needed to enable the grants to make their maximum contribution to the solution of health problems as they exist in Canada. Discussions were held with the provinces concerning proposed rearrangements in the National Health Grants, to begin April 1, 1960.

During the year, in co-operation with the Information Services Division, news items for press, radio and television use were issued regarding new developments under the program. On request, members of the staff addressed university groups, hospital administrators and public gatherings on the aims, administrative procedures and achievements of the program. Meetings were held with provincial staffs both in Ottawa and in the provinces with regard to planning and administration.

The Principal Medical Officer presented a paper on "Canada's National Sickness Survey" at the Section of Preventive and Social Medicine of the Joint Annual Meeting of the British Medical and Canadian Medical Associations, held in July 1959 at Edinburgh, Scotland.

Expenditures

The following table shows the 1959-60 expenditures by grants and by provinces.

TABLE 4
EXPENDITURES UNDER THE NATIONAL HEALTH GRANTS FOR THE FISCAL YEAR 1959-60 BY PROVINCE AND GRANT

Province	GRANT												Total
	Crippled Children	Profess. Training	Hospital Construction	Venereal Disease Control	Mental Health	Tuberculosis Control	Public Health Research	General Public Health	Cancer Control	Laboratory & Radiological Services	Medical Rehabilitation	Child & Maternal Health	
	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$	\$
Newfoundland.....	3,561	17,417	199,479	16,261	182,495	131,415		256,020	2,289	190,421	20,871	41,984	1,062,213
Prince Edward Island.....	2,059	4,129	132,196	3,071	83,223	37,640		83,795	12,874	36,355	13,221	12,292	420,855
Nova Scotia.....	18,954	29,644	89,249	17,951	374,961	187,297	38,102	449,250	133,167	100,174	11,074	62,361	1,512,184
New Brunswick.....	58,152	19,123	210,259	16,044	301,311	159,230		331,371	73,830	106,171	40,333	41,603	1,357,427
Quebec.....	133,310	147,336	4,685,615	103,444	2,243,233	1,467,871	179,739	2,098,066	1,122,632	1,961,166	305,927	645,660	15,093,999
Ontario.....	145,957	299,195	6,613,966	142,472	2,129,624	809,423	123,675	2,924,024	1,079,450	268,859	61,544	470,426	15,068,615
Manitoba.....	28,354	32,262	535,782	28,354	350,404	202,305	18,388	509,189	183,694	169,810	55,736	162,070	2,276,348
Saskatchewan.....	25,320	26,812	642,009	28,858	392,312	201,968	29,840	462,115	187,495	95,110	47,115	111,611	2,250,565
Alberta.....	37,619	36,530	402,333	37,619	985,102	254,226	17,497	652,675	253,583	56,335	32,270	134,300	2,900,089
British Columbia.....	44,026	41,352	1,429,274	47,221	642,086	308,790	28,381	870,232	271,339	28,988	85,310	159,854	3,956,853
Northwest Territories.....	6,258	1,902	418			7,719	8,272	31,980	7,793				64,342
Yukon.....					7,115	28,441							35,556
All Provinces.....	503,570	655,702	14,940,580	441,295	7,691,866	3,796,325	443,894	8,668,717	3,328,146	3,013,389	673,401	1,842,161	45,999,046

RESEARCH DEVELOPMENT AND INTERNATIONAL HEALTH SECTION

RESEARCH DEVELOPMENT

During the fiscal year 1959-60, a total of \$4,567,992.24 was made available for scientific research in both the progressively expanding program of extra-mural grants-in-aid of medical research and in departmental activities in this general area. In support of health studies in universities, hospitals and other research institutes, a total of \$2,912,089.24 was allocated, \$2,719,215.14 by way of grants-in-aid, \$96,333.10 to the National Cancer Institute and \$96,541 to the Ontario Cancer Treatment and Research Foundation.

Within the Department, \$1,655,903 was allocated for research purposes in the respective divisions indicated in Table 5. This also includes the Research and Statistics Division whose activities are concentrated in the socio-economic field. Detailed reference to the work performed in this and the other divisions listed is made in relevant sections of the report.

Allocations for extra-mural grants-in-aid by grant and by province are presented in Table 6. The funds for the National Cancer Institute and the Ontario Cancer Treatment and Research Foundation are matched with an equal contribution by the provinces concerned in support of the programs of fundamental and clinical research sponsored by those agencies.

An analysis of fields of medicine or scientific disciplines involved in the extra-mural research program is presented in Table 7, indicating the numbers of projects and the funds allocated to the specific field. Similarly, the disease entities in the research studies have been reviewed and are listed in Table 8. In the fields of medicine, it will be appreciated that there may be more than one discipline involved in the conduct of many of the studies. However, projects have been listed according to the scientific discipline which has greatest prominence in the performance of the research. This also applies to a lesser extent to those listed under disease entities where several pathological conditions may be involved. There are, of course, a number of studies which cannot be tabulated mainly for lack of relationship to any specific disease condition.

INTERNATIONAL HEALTH

The International Health Section is responsible for the co-ordination of all interests and activities of the Department in international health areas and is primarily concerned with those arising out of Canada's membership in the United Nations Specialized Agencies, i.e., World Health Organization and other United Nations organs, and the multilateral U.N. Technical Assistance Programs including the Expanded Program (UNTA) and the Children's Fund (UNICEF). In addition, the Section advises the Economic and Technical Assistance Branch (Colombo Plan Administration) on requests for aid in the health field and functions as the

assessment and placement agency for Colombo Plan Fellows undertaking post-graduate studies at Canadian medical schools and other centres for advanced training.

The World Health Assembly is the executive body of the World Health Organization. Its 12th session was held in Geneva May 12 to 29, 1959. The Canadian Delegation was headed by Dr. G. D. W. Cameron, Deputy Minister of National Health with Mr. M. Wershof, Ambassador and Canadian Permanent Representative to the European Office of the United Nations in Geneva, as Alternate Head. Other members were Dr. J. E. Bissonnette, M.P., Parliamentary Observer, Dr. G. F. Amyot, Deputy Minister of Health for the Province of British Columbia, and Dr. B. D. B. Layton, Principal Medical Officer, International Health Section. Mr. R. Harry Jay, First Secretary, Permanent Mission in Geneva, was Adviser to the Delegation.

A wide range of items of major importance in the field of international health received the attention of the Assembly. It approved a budget for the regular program of the World Health Organization for 1960 in the amount of \$16,918,700 U.S., of which Canada's share is \$483,000. In addition, the Organization is responsible for the co-ordination and technical direction of health programs financed through the United Nations Expanded Program of Technical Assistance and the United Nations Children's Fund. The total available for health activities from these sources in 1960, with funds for malaria eradication, special contributions in the Region for the Americas under the Pan American Health Organization and other sources amount to \$52,730,000. The Assembly considered a study of an intensified medical research program prepared by the Director-General and adopted his plan for fostering international medical research commencing in 1960. An amount of \$500,000 was included in the regular budget for this purpose.

The Assembly also considered W.H.O.'s activities in the field of environmental sanitation and authorized the establishment of a special account to receive voluntary contributions to provide assistance to governments in planning, preparing for and providing technical assistance in the development of community water supplies. Concern was expressed over the lack of sufficient funds to finance its special malaria eradication program in 1960 and the following years. The Executive Board and the Director-General were requested to continue their efforts to obtain funds from all possible sources including governments, industry, private organizations and individuals. This program was started in 1956 when it was decided that W.H.O. should take the initiative, provide technical advice and encourage research and co-ordination of resources in implementing a program having as its ultimate objective the world-wide eradication of malaria.

The Assembly approved an agreement between W.H.O. and the International Atomic Energy Agency to promote co-operation and consultation between the two organizations. It also delegated to the Executive Board the authority to act on its behalf concerning any question related to the United Nations Special Fund, and authorized the Director-General to co-operate with the administrators of the Special Fund and enter into working arrangements for the provision of services and the execution of health projects.

The Assembly considered the question of accommodation of the Secretariat and decided to proceed with plans for a new headquarters building at an estimated cost approaching \$10 million U.S. The Swiss Confederation and the Republic and Canton of Geneva have offered to provide a building site and to assist W.H.O. financially by granting loans to a total of \$6,976,744 U.S. The Assembly established a special account, the "Headquarters Building Fund", to receive all sums appropriated, borrowed or contributed for this project.

During the Assembly, an amendment to the W.H.O. Constitution was approved increasing the number of persons designated to serve on the Executive Board from 18 to 24. Canada has, to date, been elected twice to the Executive Board, serving the usual three year term on each occasion.

TABLE 5

SUMMARY OF INTRA-MURAL RESEARCH PROGRAM

Department of National Health and Welfare—1959-60

<i>Division</i>	<i>Research Budget Forecast</i>
Civil Aviation Medicine	\$ 3,000
Dental Health	18,000
Epidemiology	27,500
Food and Drug Laboratories	511,000
Laboratory of Hygiene	409,000
Nutrition	35,000
Occupational Health	225,020
Public Health Engineering	10,000
Radiation Protection	103,400
Research and Statistics	313,983
TOTAL	<hr/> \$ 1,655,903 <hr/>

TABLE 6

ALLOCATIONS FOR RESEARCH UNDER THE NATIONAL HEALTH PROGRAM
By Health Grant and by Province 1959-60

Province	Crippled Children	Mental Health	Tuberculosis	Public Health Research	General Public Health	Medical Rehabilitation	Child & Maternal Health	Total
	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.	\$ cts.
Nova Scotia.....		25,140 00		47,162 00			5,100 00	77,402 00
Quebec.....		334,298 54	11,350 00	183,399 75	458,162 27	3,395 00	166,841 24	1,157,446 80
Ontario.....	34,390 91	181,896 27	109,954 45	143,062 40	298,121 87		206,272 07	973,697 97
Manitoba.....		34,520 00		25,770 00	9,145 00		25,980 00	95,415 00
Saskatchewan.....		99,268 54		34,535 00	11,580 00		26,600 00	171,983 54
Alberta.....				23,260 80			46,525 00	69,785 80
British Columbia.....		65,966 33	4,000 00	33,924 50	28,157 00		33,636 20	165,684 03
Northwest Territories.....				7,800 00				7,800 00
Total.....	34,390 91	741,089 68	125,304 45	498,914 45	805,166 14	3,395 00	510,954 51	2,719,215 14

Note—Assistance to National Cancer Institute: P.E.I..... \$ 739.00
Ontario..... \$42,884.50
British Columbia..... \$10,000.00

New Brunswick..... \$ Nil
Manitoba..... \$6,500.00
Quebec..... \$36,209.60
Saskatchewan..... \$ Nil

Total: \$96,333.10

—Assistance to Ontario Cancer Treatment and Research Foundation—\$96,541.00

TABLE 7
RESEARCH ACCORDING TO FIELD OF MEDICINE
National Health Program 1959-60

Field of Medicine	No. of Projects	Amount	Per Cent of Total
Cardiology.....	21	\$ 411,176.23	15.1
Psychology and Psychiatry.....	33	410,050.40	15.1
Biochemistry.....	22	215,146.20	7.9
Pediatrics.....	17	171,688.69	6.3
Bacteriology.....	31	163,038.95	6.0
Pharmacology and Therapeutics	19	144,176.03	5.3
Neurology.....	10	137,393.00	5.1
Virology.....	12	107,031.21	3.9
Special Senses.....	6	100,671.27	3.7
Epidemiology.....	5	93,104.00	3.4
Occupational Health.....	8	91,013.55	3.3
Physiology.....	10	79,452.53	2.8
Internal Medicine.....	7	74,893.00	2.7
Obstetrics and Gynaecology.....	6	73,708.15	2.7
Tubercle Bacillus and B.C.G.....	12	72,105.60	2.6
Hematology.....	7	69,445.63	2.5
General Surgery.....	6	64,118.02	2.3
Endocrinology.....	5	52,274.00	1.9
Pathology.....	5	38,899.50	1.5
Dentistry.....	1	29,763.91	1.2
Tuberculosis.....	3	26,872.00	1.1
Geriatrics.....	3	25,864.10	1.1
Other—Miscellaneous.....	14	67,329.17	2.5
Total.....	263	\$2,719,215.14	100.0

TABLE 8
RESEARCH ACCORDING TO DISEASE ENTITY
National Health Program—1959-60

Disease Entity	No. of Projects	Amount	Per Cent of Total
Psychosis.....	29	\$ 431,323.73	15.9
Heart Disease.....	21	396,112.04	14.6
Infectious Disease.....	30	198,754.55	7.3
Neonatal Period.....	18	194,753.72	7.2
Tuberculosis.....	20	150,203.22	5.6
Nervous System.....	14	138,874.70	5.1
Pregnancy.....	10	110,917.19	4.1
Respiratory Diseases.....	11	108,381.18	4.0
Eye, Ear & Mastoid.....	7	102,243.07	3.8
Digestive Disease.....	8	91,520.26	3.3
Thyroid.....	5	74,075.00	2.7
Bones & Organs of Movement.....	10	73,975.00	2.7
Mental Deficiency.....	11	65,270.17	2.4
Neurosis.....	6	64,889.68	2.4
Arteriosclerosis.....	5	59,450.00	2.2
Anemias	5	53,235.00	2.0
Accidents.....	4	42,221.00	1.5
Senility.....	3	34,864.10	1.3
Mouth and Teeth.....	1	29,763.91	1.1
Dysentery.....	4	25,804.00	.9
Alcoholism.....	3	25,648.55	.9
Other—Miscellaneous.....	12	77,936.07	2.8
Unclassifiable*.....	27	168,999.00	6.2
Total.....	263	\$2,719,215.14	100.0

*No specific disease involved.

SPECIAL HEALTH SERVICES (CONSULTANT AND LABORATORY)

BLINDNESS CONTROL DIVISION

The bulk of the Division's work concerns allowances provided under the Blind Persons' Act and its Regulations. Closely related to this work is the treatment scheme for restoring vision to recipients of blindness allowance. The Division has participated in the National Health Grants Program, in the fields of speech training and hearing problems, as well as those concerned with vision. Educational material relevant to the preservation of vision is prepared in co-operation with the Information Services Division.

The year was marked by the retirement of Dr. J. H. Grove, who served as Chief of the Blindness Control Division since 1948, and who contributed so much to the Blindness Control program in Canada, particularly through the development of the treatment scheme and the establishing of glaucoma clinics across the country.

Blindness Allowances

Under the Blind Persons' Act and its Regulations, the Division issues blindness certificates to the provincial authorities who handle the administration of blindness allowances. The Division maintains a roster of oculists who examine applicants for allowance and re-examine recipients where indicated. Travelling clinics are conducted to carry out these examinations in remote or sparsely populated areas. The eye examination reports are reviewed by this Division and provide a basis for rulings on eligibility for blindness allowance.

On March 31, 1959, there were 8,747 persons between the ages of 18 and 70 in receipt of blindness allowance of a total of just over 23,000 known blind in Canada. On March 31, 1960, the number receiving the allowance was 8,671.

Treatment Scheme

Originated in 1948 by an Order-in-Council, the plan provides to suitable recipients of blindness allowance free treatment for the restoration of vision. The plan is administered by this Division and the Department reimburses the provinces which participate for 75 per cent of the cost of treatment. While cataract extractions represent the bulk of treatments carried out, corneal transplants are being done more frequently than in preceding years. During the current year, of a total of 105 cases treated, 10 were corneal transplants, with a successful result in 8 cases. The experience with this plan is shown in the following tables. Successful cases are those in whom vision was better than 20/200 following treatment and who were, therefore, no longer blind under the Act. Among the unsuccessful cases, many benefited by an improvement in guiding vision.

TREATMENT CASES

Year	Treated	Successful	Unsuccessful
1954-55	53	44 (83%)	9 (17%)
1955-56	83	62 (75%)	21 (25%)
1956-57	54	44 (81%)	10 (19%)
1957-58	94	68 (72%)	26 (28%)
1958-59	88	72 (82%)	16 (18%)
1959-60	105	88 (84%)	17 (16%)

CASES TREATED FROM 1948 TO MARCH 31, 1960

Province	Total	Successful	Unsuccessful
Newfoundland	5	2 (40%)	3 (60%)
Prince Edward Island	3	3 (100%)	0 (—)
Nova Scotia	30	19 (63%)	11 (37%)
New Brunswick	99	81 (82%)	18 (18%)
Quebec	301	234 (78%)	67 (22%)
Ontario	154	116 (75%)	38 (25%)
Manitoba	14	11 (79%)	3 (21%)
Saskatchewan	20	16 (80%)	4 (20%)
Total	626	482 (77%)	144 (23%)

It is gratifying to note the steady increase in the number of cases treated each year, and the percentage of successful results. The average cost of treatment per case to the Federal Government in the past year was just under \$325, which is substantially less than the cost of a year's blindness allowance.

Health Grants Projects

- (a) **GLAUCOMA CLINICS.** Three new glaucoma clinic projects were approved during the past year, bringing the total approved under the program to 14. Glaucoma Clinics are operating at present in Saint John, N.B., Halifax, Quebec City, Montreal (3 clinics), Sherbrooke, Toronto, Ottawa, London, Winnipeg, Saskatoon, and Victoria.
- (b) **EYE RESEARCH.** The National Health Grants Program has continued to support projects in basic and clinical research in the field of ophthalmology. Research studies were conducted on glaucoma, diabetic retinopathy, retinal detachment, corneal transplants, and strabismus.
- (c) Other projects for children's eye clinics, visual screening of school children, speech training, and auditory clinics, were supported under the Health Grants program.

Field Study

With the co-operation of the Research and Statistics Division and the Province of New Brunswick, a field study was made of aniridia occurring in a localized area. The findings are being reviewed in their clinical, genetic, and sociological aspects, and will ultimately be published.

Educational Material

The booklet on "Eye Care" was re-written during the year, but has not yet been published.

The pamphlet on "Eye Trouble", which has enjoyed wide distribution, was reprinted.

CHILD AND MATERNAL HEALTH DIVISION

The basic function of the Child and Maternal Health Division is to assist in the promotion of optimum health of mothers and children throughout Canada. Working closely with the provincial departments of health, other health agencies, professional organizations, and through its advisory committee, the Division renders consultation services, assists in the administration of National Health Grants, prepares educational materials, and encourages and assists in field research and the study of current programs and problems. These activities are directed toward the development, extension, and co-ordination of comprehensive health programs and services for mothers, children of all ages, and their families. Continual effort is also directed toward public education to enable families to utilize the available information and services.

The Challenge of the Field

Reference to a few vital statistics will highlight a picture of interest to all health authorities. Canada is a young, growing nation. A birth rate of 27.6 is high among nations with comparable standards of living. Almost one-half million new Canadians are born each year and one-third of the population is under the age of fifteen. In addition, a significant number of young immigrant families arrive each year. Consideration of maternal and infant deaths and an analysis of their causes help to refine the problem and to indicate areas needing emphasis in service and education.

Infant Deaths

In 1958, out of 470,118 live births, 14,178 infants died in their first year and about 9,055 died in the first four weeks of life. While great strides have been made during the last two decades in reducing our infant death rate, from 64 per thousand live births in 1938 to 30 in 1958, considerably more must be done.

Canada is not yet in a favourable position compared with other countries of a similar standard of living, a dozen of which have lower infant mortality rates than our own. Moreover, the countries which exhibit the best records have rates which are only a little more than half of the Canadian one. Five main causes account for about two-thirds of infant deaths. These are in order of importance: immaturity, pneumonia, congenital malformations, perinatal asphyxia and birth injury.

Maternal Deaths

In 1958, there were 263 deaths of mothers in Canada, a rate of 0.6 deaths per 1,000 live births. The main causes were haemorrhage and toxæmia.

Studies of maternal deaths being carried out in a number of provinces reveal the need for further improvement in maternal care.

Consultation Service

This year, the Division added to its staff a medical consultant and a technical officer, thereby placing it in a much better position to carry out its program.

Annual visits to provincial health departments by both a medical officer and a nursing consultant are arranged through the Maternal and Child Health Divisions in the six provinces where these exist, as well as through the Public Health Nursing Divisions. By discussion and observation, current public health and hospital services programs are reviewed. Consideration is given to prospective programs, professional training and the use of Child and Maternal Health Grant funds. The professional staff participated in two provincial institutes for nurses and in a number of national and community meetings. Liaison was maintained with university schools of medicine, nursing and public health, as well as with professional associations and voluntary agencies at both national and provincial levels.

Health Grants Program

Requests for grant assistance to improve or extend maternal and child health programs are reviewed by the Division and referred to other departmental consultants concerned, where necessary. Most projects are submitted under the Child and Maternal Health Grant, though the Division also assists in the administration of the Crippled Children and other grants. Utilization of both of these grants named continued to be high (see Table 9).

Child and Maternal Health Grant funds assist in the support of a number of provincial maternal and child health consultant services, as well as the professional training of provincial consultants. Funds continue to be used for professional training in many areas of maternal and child care. A variety of services of a basic public health nature as well as more specialized programs directed toward the solution of specific health problems are receiving health grant support.

With the additional staff, the Division has been able to assume increased responsibility in the technical appraisal of research projects submitted for support. It is gratifying to note that a significant proportion of the Child and Maternal Health Grant is being used for research. Emphasis is being placed on diseases of

the mother and the newborn. Among other problems being studied are vision problems, genetic problems, the metabolic causes of mental retardation and nutritional deficiencies.

A substantial proportion of funds from the Crippled Children's Grant is being used to provide services and care for children with locomotor disabilities. Support is also given to professional training, and some funds are being used for research.

Educational Materials

A considerable proportion of the budget for educational materials is used each year for the production of "The Canadian Mother and Child". In addition, several other publications directed to the public and also to professional personnel were reprinted during the year.

An example of our concern for the maintenance of high standards of hospital care, is a new manual for nurses, entitled "Application of the Principles of Medical Asepsis to Maternity and Newborn Care".

The continued usefulness of our booklets, manuals, and posters is achieved in large measure through careful joint planning and consultation in the preparation stages with provincial authorities and other specialist groups.

Field Research

Although the provision of consultation service to health departments and voluntary health agencies has ranked foremost in the program of the Division, prospective plans include the more definitive analysis of programs, facilities, procedures, and techniques currently in practice, as well as those considered desirable. This type of research is needed to complement the clinical research being supported by health grant funds. It will result in the accumulation of a body of knowledge essential for the development of standards for maternal and child health services and for sound program planning.

Advisory Committee

The agenda of the second meeting of the Maternal and Child Health Advisory Committee included reports of the initial meetings of its three sub-committees, namely, Statistics, Research, and Standards of Care. Reports of provincial programs were given by provincial representatives and members discussed such matters as the detection of Phenylketonuric Oligophrenia, poison control programs, health education materials, the relationship between hospital and public health services in maternal and child health, and nutritional standards for expectant and nursing mothers and infants. It is apparent that the Advisory Committee and its sub-committees will stimulate further study of maternal and child health problems on a national basis as well as providing a channel of communication among public health workers, clinicians, university departments of obstetrics, pediatrics, and nursing. The study of "Maternal and Newborn Care in Hospitals", now in its planning stage, is the outgrowth of a recommendation made by the Sub-committee on Standards of Care. It is an example of the field research described above.

TABLE 9
EXPENDITURE OF NATIONAL HEALTH GRANTS
1953-1960

Crippled Children's Grant	Funds Available	Funds Expended	Per Cent Expended
Year			
1953-54.....	\$ 519,898	\$ 449,214	86
1954-55.....	519,898	427,319	82
1955-56.....	519,898	415,973	80
1956-57.....	519,898	465,751	89
1957-58.....	519,898	473,291	91
1958-59.....	519,898	413,228	79
1959-60 (a).....	519,898	411,030	79
Child and Maternal Health Grant			
Year			
1953-54.....	500,000	114,341	23
1954-55.....	1,000,000	560,385	56
1955-56.....	2,000,000	1,009,408	50
1956-57.....	2,000,000	993,277	50
1957-58.....	2,000,000	1,165,550	58
1958-59.....	2,000,000	1,700,420	85
1959-60 (a).....	2,000,000	1,511,551	76

(a) Preliminary figures.

DENTAL HEALTH DIVISION

The Dental Health Division is concerned with the prevention and control, in children, of the dental complex of disease and disability which is made up chiefly of tooth decay, malocclusion, and periodontal disease.

The work of the Division falls into three general inter-related components: (1) Research in the area of preventive measures which appear to hold promise of effective mass application; (2) Health education and the production of health education materials; (3) Consultative and liaison services with other divisions of the Department whose work has some bearing on the dental field, with provincial departments of health, with universities, with dental associations and other voluntary health and scientific bodies, and with dental agencies of other countries, including W.H.O.



Research

A report showing the results of 14 years of fluoridation at Brantford, Ontario, was published this year.

A study was completed of the effectiveness of an annual topical application of a 10 per cent stannous fluoride solution during a two-year period. The study involved 700 children.

Another study of the effect of a topically applied stannous fluoride solution, which was begun last year and involves 1,200 children, is being continued this year.

Local departments of health in two provinces are now collaborating on stannous fluoride studies.

Health Education

This Division works closely with the provincial dental divisions and through them, as well as through Information Services Division, with the provincial health educators.

The demand for reprints of existing health information materials remains high. This year two new posters for use in schools were produced.

Consultative Services

Almost the full time of one dental officer is devoted to giving assistance to Indian and Northern Health Services and to Emergency Health Services. The Division collaborates also with Health Grants, Research and Statistics, Food and Drug and to a lesser degree with several other divisions.

All provincial departments of health are visited at least once a year and the progress of grant-aided programs examined and discussed with the provincial dental directors.

Liaison is maintained with the Public Health Committee of the Canadian Dental Association and with corresponding committees of provincial associations.

Other Activities

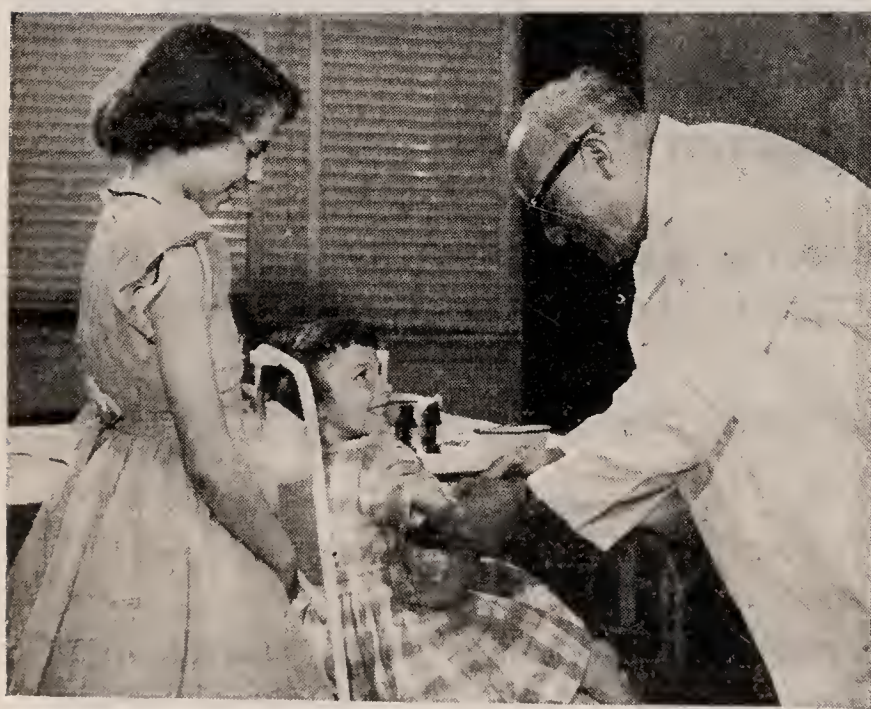
Three papers were published in professional journals and two additional ones have been accepted for publication.

An address was delivered to a National Convention of the Canadian Dental Association; another was delivered to an international meeting of public health dentists representing 16 countries; and a third to a meeting of a provincial dental association.

EPIDEMIOLOGY DIVISION

The purpose of the Epidemiology Division is to provide an epidemiological service at the national level. The scope of this service is best described by a definition of epidemiology as "the science concerned with factors and conditions which determine the occurrence and distribution of health, disease, defect, disability, and death in populations".

The primary functions of the Division are epidemiological research, consultation, and technical information.



Lung Cancer Study

In 1955, the Epidemiology Division and the Research and Statistics Division, together with the Department of Veterans Affairs undertook a continuing prospective study on the relationship of residence, occupation, and smoking habits to death from lung cancer and other selected causes among recipients of pensions through the Department of Veterans Affairs. Also included are those persons receiving financial assistance through the War Veterans Allowance Board. This

study was continued through the year and processing of data was scheduled to permit preparation of a preliminary report in 1960 concerning World War I respondents in the study who died before December 31, 1959.

Leukemia Study

Last year, in co-operation with a large hospital in Ontario, a follow-up study was begun of approximately 2,500 children born in the period 1939-1955 who had been exposed to X-rays during the prenatal period. The object of this

study is to determine the possible relationship between X-ray exposure before birth and subsequent development of leukemia or other forms of cancer. This study was continued during the year.

Staphylococcal Infections in Hospitals

The Epidemiology Division is represented on the National Research Council Associate Committee on Control of Hospital Infections, whose purpose is to study the problem of hospital infections and to make recommendations concerning control measures. The Division assisted the work of this Committee by tabulating and analysing reports of staphylococcal infections from hospitals which are participating in the study. A preliminary report for the first six-month period, October 1958 to March 1959, has been published.

Survey of Local Health Services

During the year, the Epidemiology Division and the Research and Statistics Division undertook the development of techniques to assist in the evaluation of local health services. Study in this area is considered necessary in view of new developments and changing needs in the whole field of community health services. The initial stage of this study was undertaken in co-operation with the School of Hygiene of the University of Toronto and a detailed questionnaire has been prepared.

Live Poliovirus Vaccine

The Epidemiology Division is represented on the National Technical Advisory Committee on Live Poliomyelitis Vaccines which was established in October 1959 by the Dominion Council of Health. This Committee has studied the use of live poliovirus vaccines in Canada and has assisted in designing and implementing essential trials of this new type of vaccine.

Paralytic Poliomyelitis

In 1959, there were over 1,800 cases of paralytic poliomyelitis reported in Canada. This was the second highest incidence of paralytic poliomyelitis ever reported in this country. Weekly telegraphic reports of cases of paralytic poliomyelitis were summarized and this information distributed. Assistance was offered to the City of Montreal Board of Health through membership on the Subcommittee on Poliomyelitis. The Division also arranged for the air transportation of mechanical respirators to Montreal and St. John's, Newfoundland, from various parts of Canada.

Accidents

The Division was active in the accident prevention field and had representation on the Canadian Highway Safety Council, the Canadian Public Health

Association Committee on Accident Prevention, and the Nucleus Committee of the Canadian Medical Association Committee on Medical Aspects of Traffic Accidents. These groups made considerable use of the knowledge and facilities of the Division.

Tuberculosis

One of the functions of the Division is to make recommendations concerning the allocation of national tuberculosis control grants. For this purpose, visits were made by Division Medical Officers to various sanatoria in Quebec and Ontario. The Division was also associated with the Canadian Tuberculosis Association and the Health and Welfare Division, Dominion Bureau of Statistics in planning and conducting the National Tuberculosis Conference held in Ottawa in March, 1960.

Venereal Disease

The Division assists provincial health departments in the follow-up of venereal disease contacts when requested. A report prepared by this Division is distributed to provincial health departments semi-annually, as well as to other interested agencies, and represents, at this time, the most complete compilation of such figures available for the 10 provinces as well as for 17 of the larger Canadian cities.

Three hundred and eighty-nine cases of primary and secondary syphilis were reported in 1959. The average for the three preceding years was 187 cases. The number of gonorrhea cases reported in 1959 was 14,768, a decrease of 68 from 14,836 reported in 1958.

Applications for national venereal disease control grants were studied and recommendations made. The technical manual for physicians entitled "Syphilis and Gonorrhea" which was revised and printed last year was translated into French and printed during the year.

Chronic Disease

Applications for cancer control grants were referred to the Division for study and recommendation.

Members of the Epidemiology Division played an active part on the departmental Committee on Chronic Diseases and Health Problems of the Aged.

Epidemic or Unusual Communicable Diseases

Medical assessment was made of current national and international epidemiological information. Summary reports were published periodically for the use of medical officers of health and other professional public health personnel.

Technical Information

Numerous medical periodicals and reports of an epidemiological and statistical nature from various countries and the World Health Organization are regularly received by this Division. Most of the articles are indexed, abstracted and filed for ready access. These systems serve several purposes including the answering of many enquiries from both medical and lay individuals. This informational material is also employed for the compilation of selective reference lists.

Scientific Reports and Publications

As well as the reports and publications referred to above, annual supplements to the "Traffic Accidents Medical Bibliography" and "Selected Canadian Public Health References of Epidemiological Significance" were published and distributed.

Medical Officers of the Division prepared and delivered papers of epidemiological interest at several professional meetings.

HOSPITAL DESIGN DIVISION

This Division is a consulting service to provincial health departments and to those concerned with the planning and operation of hospitals. It co-operates with the provinces in their efforts to promote sound planning for health institutions of all types.

Plans of every hospital requesting assistance under the Hospital Construction Grant of the National Health Grant Program are studied to see that they conform to minimum standards of hospital construction as prepared by this Division. These plans are also studied to determine the amount of federal assistance payable under the terms of the grant.

Consultations

The provinces, as well as a number of architectural firms, forward drawings to this Division during their preliminary stages for criticism and consultation prior to submitting a formal request for federal assistance. The advantage of this procedure is that the plans can be easily altered at an early stage in their development. This Division often produces alternate plans which are adopted wholly or in part for hospital projects.

The Division has undertaken research planning for small hospitals of 30 to 40 beds, and also the planning of a surgical suite to control possible cross infections. This is being undertaken in co-operation with members of the National Research Council Committee on the Control of Infections in Hospitals.

Hospital Construction Grant

In the past fiscal year many amendments were approved for renovation programs that form part of a construction program. These reviews involved the evaluation of the request in relation to the program as a whole to ascertain if minimum standards were being met and if the integration of the services contained in the renovations provided a good hospital service.

Many projects are being submitted for renovation programs which do not involve new construction. This is considered a healthy aspect in the field of hospital construction, as many hospitals are improving their ancillary services as well as their diagnostic, therapeutic, and treatment services, to bring those services in line with the number of patient beds provided in the hospitals.

Since the inception of the Hospital Construction Grant in 1948, more than \$133,875,000 has been allocated towards the construction of accommodation for more than 83,804 patient beds of all types, 10,826 bassinets for newborn, 16,765 nurses' beds, and 425 interns' beds. Grants have also been approved on a floor area basis for community health facilities, which include such areas in hospitals as out-patient departments, emergency, radiology, laboratories, pharmacies, and remedial therapy departments. Grants on a similar basis are also approved for training areas for hospital personnel.

Of the total amount allocated for Hospital Construction \$4,749,000 was approved for renovation projects.

Other Activities

During the past year, the Chief of the Division spent two months in certain European countries studying the latest developments in hospital design and institutions for the care of the aged. Much valuable information was obtained. While in Scotland he attended the International Hospital Planning Congress and also the Allied Exhibition of Hospital Equipment held in London at the Olympia. One result has been a paper on Geriatrics given at the annual meeting of the Associated Hospitals of Alberta, and this paper has been the basis of further talks on this subject given at five other meetings in Ontario.

He was a member of a panel at the American Psychiatric Association's annual meeting and the 1st Annual Convention of the Quebec Hospital Association. He presented papers at the Canadian Hospital Association Convention and the Hospital Institute in Halifax. A paper on Hospital Alterations was published in the Journal of the Canadian Hospital Association. He also gave a day of lectures on hospital planning to the students of the Hospital Administrators' Course at the University of Toronto. He has continued to act in a consulting capacity for hospital planning of the Armed Forces and is a member of the Hospital Requirements Committee (National Defence) and the Committee on the Control of Infections in Hospitals, as well as acting as chairman of the Canadian Standards Association Committee on Safety Code for Hospital Hazards.

A paper was presented by a member of this Division, at the Regional Hospital Council of the Ontario Hospital Association.

LABORATORY OF HYGIENE

As Canada's national reference laboratory in the field of public health, the Laboratory of Hygiene combines in one institution, bacteriological, biologics control, biochemical research, clinical, virus and zoonosis laboratories, with associated animal breeding and administrative services. It is housed in three build-

ings—the Central Laboratory of Hygiene Building, the Virus Section which is located in a separate building in Tunney's Pasture, and an Animal Breeding Unit located in Wrightville, P.Q.

Bacteriological Laboratories

The Bacteriological Laboratories serve as national reference centres for the study of various groups of pathogenic bacteria and for the provision of diagnostic services which cannot be maintained by the ten provincial laboratories.

ENTERIC BACTERIOLOGY

These laboratories serve as a national reference centre for the diagnosis of the pathogenic enterobacteria—*Salmonella*, *Shigella*, and coliform organisms—many of which originate from animal sources and which cause typhoid, paratyphoid, and dysentery in man.

STAPHYLOCOCCAL INVESTIGATIONS

The typing of staphylococci by means of bacteriophages is an increasingly valuable method for tracing the spread of staphylococcal infections in hospitals and for determining the effectiveness of control measures. A collaborative investigation on staphylococcal carriers was continued in co-operation with Queen's University, Kingston. The centre also participated in an evaluation study conducted by the International Reference Centre, Colindale, England. Two papers, and a number of lectures and talks, were presented during the year.

OTHER SPECIAL GROUPS

The Bacteriological Laboratories also serve as the national reference centre for the serological identification of haemolytic streptococci. There has been an increased interest on the part of clinicians in the typing of streptococcal strains, since knowledge of the type may greatly influence the medical treatment of the case. In collaboration with McGill University, a study of the distribution of streptococcal serotypes in Montreal school children was continued.

SANITARY BACTERIOLOGY

The Sanitary Bacteriology Unit has a continuing commitment to co-operate with the Public Health Engineering Division and the Department of Fisheries in the control of pollution in shellfish growing areas in the Atlantic Maritime Provinces. The Unit also collaborated with the Department of Fisheries and the Province of Quebec in the successful control of paralytic shellfish poison, a serious seasonal problem in many growing areas.

Biologics Control Laboratories

The activities of this section revolve about the Laboratory of Hygiene's function of controlling biological drugs such as vaccines, toxoids, sera and antibiotics under the Canadian Food and Drugs Act, and its role as a national public health laboratory. The major part of the work program, both research and

routine analytical testing, is concerned with the control of these drugs. This involves the inspection of establishments licensed for the manufacture of biological products for sale in Canada, the routine control testing of these products and research related to the improvement of control tests, and to the use of these drugs in the field.

ROUTINE CONTROL

The manufacture, for sale in Canada, of drugs such as vaccines, toxoids, sera, etc., and injectable antibiotics is subject to Canadian Biologics Licence. Such licences are granted only after products have been tested, the manufacturing laboratories have been inspected and have acceptable facilities, and suitably qualified and trained personnel. Periodic inspections are carried out on every plant possessing a Canadian licence to ensure that the standards have been maintained, and control tests are carried out on market samples throughout the year. At present, there are 55 firms with Canadian Biologics Licences (16 Canadian, 30 United States and 9 European). Between 2,500 to 3,000 specimens are tested per annum. The number of such tests has been steadily increasing. Thirty-six inspections for Canadian Biologics Licence were carried out during the fiscal year. Two applicants were refused a Canadian Biologics Licence and licences of four other applicants were delayed until satisfactory changes in production and control were completed.

RESEARCH

The successful operation of any control program requires an active and effective research program. Such research concerns not only test methods, but must include studies on the drug's use and activity.

ACTIVITIES OF SUB-SECTIONS

Biologics Control: The majority of work in this section is concerned with control testing. Identity, safety, pyrogen, potency, and sterility tests are carried out routinely on licensed preparations and sterility and pyrogen tests on non-licensed injectable drugs. A total of 1,043 specimens from 69 manufacturers were received and tested in the fiscal year, and 7 samples were rejected as unsatisfactory.

Antibiotics: The majority of work in this section is concerned with the control of antibiotic drugs of all types; oral, injectable, sprays, ointments, salves, etc. A total of 1,833 samples were received and tested. This necessitated 4,509 assays. Eleven preparations for human use and 21 for veterinary use were found unsatisfactory and removed from the Canadian market.

Biochemistry: This group carried out control tests on sulphonamide and other antibacterial drugs. A considerable portion of its time is devoted towards the development of chemical test methods and also to immuno-chemical research using radio-active isotopes in an effort to improve assay techniques for vaccines (whooping cough, typhoid) and to study the fundamentals of immunity.

Immunology: The majority of work in this section is devoted to research related to biological drugs or to public health problems. The studies on B.C.G. (tuberculosis) vaccines and tuberculins have yielded excellent results and a number of new methods have been introduced.

Staphylococcal disease has become a very serious hospital problem. During the past year a staphylococcal vaccine has been developed that will protect experimental animals against infection with a wide variety of staphylococcal strains. Preliminary studies on human subjects have been started. A new method for assaying staphylococcus vaccine has also been introduced.

OTHER ACTIVITIES

This section participates in collaborative studies with laboratories from other countries for the establishment of international standards and is represented on a number of W.H.O. groups for this purpose. In the past few years, the section has aided other countries in the training of personnel in biologics control procedures.

Biochemical Research Laboratories

As noted in last year's report, the activities of the Biochemical Research Section have gradually expanded into distinct areas of research.

CELL NUTRITION

Studies were continued along the main lines outlined in last year's report, with the objective of obtaining precise information on the nutritional requirements of normal cells. This information is required as a reference baseline for studies on malignant cells. Pathways of amino acid utilization have received intensive study and considerable attention has been devoted to the carbohydrate requirements of cell cultures.

CELL METABOLISM

Studies on the metabolic patterns of a variety of normal and malignant cell cultures have been continued and extended. This investigation is based on the change in the amino acid content of the culture medium occurring during the cultivation of different cell types.

ANTI-TUMOR AGENTS

Last year's report described the collaborative project which has been underway between the Department of Apiculture of the Ontario Agricultural College, the Department of Therapeutics of the University of Toronto, and the Laboratory of Hygiene. This work had established that admixture of royal jelly with tumor cells prior to inoculation of mice would prevent completely the development of transplantable AKR leukemia and ascites tumors in mice. This work has now been expanded into a major activity, with studies *in vivo* and in tissue cultures.

TUMOR-VIRUSES

One of the most active fields in cancer research at the present time is the investigation of the possible relationship between tumors and viruses as causative agents. Such a relationship has been established with many types of animal tumors and the causative agents have been designated "polyoma viruses". Since all cell cultures, even of normal origin, rapidly develop malignant characteristics, the possibility that tissue cell lines may harbor polyoma viruses cannot be ignored. Consequently, investigations in this field have been initiated during the past year.

BACTERIOLOGICAL CHEMISTRY

Methods for the preparation of highly purified alpha-and beta-lysins have been developed during the past year. Results of experiments with the highly purified alpha-lysin indicate that the material exerts a direct toxic effect on tissues. Similar studies with delta-lysin are in progress.

Preliminary experiments have been conducted to develop a standardized test for virulence of the staphylococci toward mice. The role of various serum fractions which influence virulence is being investigated.

Clinical Laboratories

The Clinical Laboratories section consists of the Clinical Chemistry and Serology units as well as an Evaluation unit.

CLINICAL CHEMISTRY

In clinical chemistry, consultant services are offered to hospital and public health laboratories. Included in the program during the year were the distribution of standard solutions used in the determination of hemoglobin and a study of the accuracy of calibrated glassware available on the market.

On the recommendation of the National Research Council, the preparation and periodic distribution of standard cyanmethemoglobin solutions has been undertaken at the Laboratory of Hygiene. At present 195 laboratories are on the mailing list.

Work on the Manual of Clinical Chemistry for Hospital Laboratories has been continued and new outlines of procedure prepared. During the year the printing of the Manual in the French language was completed and 187 copies have been distributed.

In the evaluation of commercial test kits and reagents, a pregnancy test is under study in co-operation with a local hospital. The development of automation in laboratory analyses is being closely followed. A Technicon Auto-analyzer has been obtained and a number of different procedures checked on it to evaluate its performance for use in clinical laboratories.

SEROLOGY

Syphilis Serology: The serology laboratory serves as a national reference laboratory in syphilis serology. All provincial public health laboratories use reagents for the serodiagnosis of syphilis which have been prepared and standardized at this Laboratory.

The ninth serological proficiency survey has been completed and the results indicate a satisfactory degree of uniformity in the blood tests for syphilis across Canada.

Research in the unit has been directed towards the preparation of a totally synthetic antigen for the serodiagnosis of syphilis. A paper on this subject was prepared for presentation at the Eleventh Annual Symposium on Recent Advances in the Study of Venereal Diseases in Chicago, Illinois.

Blood Grouping Sera: A survey of blood grouping and Rh typing sera available commercially in Canada, initiated in January, 1958, was completed. On the basis of this study it would seem that the quality of sera on the market is satisfactory.

EVALUATION UNIT

In the evaluation unit there are three main responsibilities:

(1) To provide aids and develop programs in order to improve diagnostic services in hospitals and public health laboratories.

(2) To assist in the broad planning and integration of diagnostic services in various provinces.

(3) To render consultant services in submissions pertaining to laboratory work under the various National Health Grant programs.

Virus Laboratories

The major activities of the Virus Laboratories were directed towards the safety and potency testing of commercially produced viral vaccines. Over 150 lots of Salk polio vaccine representing about 90 million doses have been submitted by Canadian and American manufacturers over the past five years and safety and potency tests were carried out in more than 4,000 monkeys and over 1 million tissue cultures during this period. During the past year, 25 commercially produced Salk vaccines were examined. Three of these were rejected on grounds of safety and one failed to meet the Canadian requirements for potency.

With the introduction of the oral live polio vaccines, new techniques and testing procedures required in the governmental control of these products are being developed at the Virus Laboratories. Experimental lots of the new vaccine have been produced and are being tested for neurovirulence in monkeys and genetic characteristics in tissue cultures.

Standardized antigens and antisera of the performance of over 16,000 tests were supplied to the provincial laboratories of health during the fiscal year. The potency and specificity of these antigens has been improved as a result of developmental research carried out at the Virus Laboratories.

The adaptation of an ascitic tumor to culture *in vitro* has been achieved and the results are being published in the Journal of Cancer Research. The application of the work lies in the ability of this cell line to support propagation of certain human viruses, thus adding another diagnostic tool to the methods and procedures now in use.

Zoonosis Laboratories

The St. Lawrence Seaway areas surveyed this year for rodent and avian-borne diseases such as pasteurellosis, leptospirosis, rat-bite fever, and other diseases included Trenton, Cobourg, Toronto, and Montreal. For comparison purposes, a similar type of survey was made in Saint John, New Brunswick and Halifax, Nova Scotia. Over 500 specimens were submitted by the field party. Ectoparasites

collected from rodents included fleas, ticks, and mites. New distributional records of these arthropods were obtained. A report on the occurrence of the flea *Xenopsylla cheopis*, well-known as a vector of plague to man, has been accepted for publication. Serological evidence indicating that ornithosis is common in pigeons in Saint John, New Brunswick was obtained.

An investigation of a tick infestation in Nova Scotia was begun during late spring. Over 3,700 dog ticks were tested for rickettsial and viral diseases. Ticks from a sick moose were collected and tested for disease organisms at the request of the Nova Scotia Department of Lands and Forests.

Collaborative studies with provincial laboratories to determine the occurrence of Q fever in cattle have been pursued. Surveys of bovine sera and herd milk are now in progress or have been completed in all but two provinces. Arrangements have been completed with the Ontario Department of Health to carry out collaborative field investigations to determine the public health significance of this disease and the extent to which the causative rickettsia may have become entrenched in wild animals living in the vicinity of Q fever positive herds.

A serological survey of meat handlers at a local packinghouse, initiated because of a reported high incidence of leptospirosis in slaughtered hogs, was completed. Tests in 149 sera to detect antibodies for brucellosis, Q fever, and tularemia, in addition to various types of leptospirosis, was carried out. A limited number of tests for leptospirosis in swine slaughtered in a packinghouse in Saint John failed to indicate that leptospirosis from this source is a problem in that area.

Laboratory studies to improve methods of isolating leptospire from animals were undertaken. Improvements in standard methods of trapping rodents are under investigation.

During the year, some 4,600 cc. of concentrated antigens for diagnosing various zoonosis were prepared and shipped to provincial public health laboratories.

Parasitology

The Institute of Parasitology serves as the Parasitology Section of the Laboratory of Hygiene and as a centre for:

(1) *The Diagnosis of Parasitic Infections*: During the past year, 389 stool specimens were received, processed, examined, and reports forwarded to those concerned. This figure shows a drop again from the number received during the previous year (446). It is considered that this drop is due in part to the growing competence of laboratory technicians.

(2) *The Identification of Parasites of Man*: Thirty-five such identifications were made during the year.

(3) *The Distribution of Hydatid Antigen for the Casoni Test*: There has again been a considerable increase in the number of ampoules prepared from Canadian reindeer material distributed, on request, to hospitals, public health laboratories, etc. In the year under discussion, 393 ampoules were supplied as compared with 249 last year and 116 the previous year. It is considered that this continuing increase in requests for antigen shows a growing awareness on the part of physicians of the possibility of hydatid infection rather than any increase in the incidence of hydatid infection itself.

(4) *The Carrying out of Complement Fixation Tests for Hydatid* of which 27 were carried out during the year.

(5) *Trichina Precipitation Tests*: Sixty-four of these were made during the year but 50 of these were made for Dr. M. Hoffman of Ile a la Crosse, Saskatchewan, where there was a suspected outbreak of Trichinosis.

(6) *Trichina Antigen Supplied to Hospitals, etc.*: Thirty-one ampoules of this material were sent out during the year.

(7) *Refresher Courses in Advanced Parasitological Techniques for Hospital, Public Health, and Service Technicians*: Four formal courses were given and there were three technicians from the R.C.A.F. at each of the first three courses. Technicians from Ontario, Saskatchewan, Alberta, and Newfoundland attended these courses. One technician from British Columbia attended an informal course in November.

Administration Section

During the fiscal year 1959-60 the Administration Section continued to provide essential services.

MEDIA

The media room was responsible for the preparation of approximately 100 various types of culture media for the laboratory. The total quantity of this year was 5,774 litres, or approximately 50 per cent increase over the previous year. Recent trends in media requirements show that experiments are conducted on very large scales requiring the preparation of large quantities of media at one time.

ANIMAL BREEDING COLONY

Total production for guinea pigs during the year was 10,462 of which 2,000 animals were returned as replacement breeders and 6,966 were made available for laboratory use.

Mortality rate for the year was 16 per cent, much of it due to the rise to 25 per cent mortality rate early in 1960 occasioned by a pneumonia outbreak.

MEDICAL REHABILITATION AND DISABILITY ADVISORY SERVICE

During the fiscal year, rehabilitation programs continued to develop and expand in new areas while the number of individuals receiving and requesting Disabled Persons Allowances continued to increase. Consequently, the activities of this advisory service also increased to meet the more varied need of those interested in helping disabled individuals in Canada.

Medical Rehabilitation

Consultative services were provided as before to the National Health Grants Administration and all projects submitted by the provinces under the Medical

Rehabilitation Grant, or under other Grants but concerned with rehabilitation, were appraised regarding their suitability in the over-all provincial rehabilitation program, by the three consultants of this service.



Many requests for advice and information from voluntary organizations, private institutions concerned with rehabilitation, and other interested bodies received attention. Enquiries were answered; discussions were held, where necessary; and the consultants participated in a number of meetings. Annual meetings and conferences of professional associations whose members help to make up medical rehabilitation teams were attended and, where requested, papers were read; seminars were chaired; or discussion groups held by our consultants.

A meeting of the National Advisory Committee on Rehabilitation of Disabled Persons was held during the year in Toronto and the Medical Consultant and Chief of the Service attended as the official departmental representative.

At the spring session of the Dominion Council of Health, a memorandum was prepared by the Service and submitted for discussion to the members on the importance and development of provincial programs on medical rehabilitation in the over-all Provincial Public Health Programs.

TABLE 10
MEDICAL REHABILITATION GRANT ANALYSIS
1953-1960

	1953-54	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
Amount Available	\$500,000	1,000,000	979,484	998,984	961,591	964,234	1,022,984
Amount and Per Cent Approved	\$75,855 15.8	213,374 21.3	355,927 36.3	547,085 54.7	736,662 76.6	814,215 84.4	755,000* 73.8
Amount and Per Cent Spent	\$58,222 12.1	168,679 16.8	303,419 30.8	487,724 48.8	633,397 65.8	691,612 71.7	539,373** 52.7

*Preliminary figure for fiscal year ending March 31, 1960.

**Expenditure to Feb. 29, 1960.

N.B. The reduction in both approved and spent totals for 1959-60 is in relation with the availability of medical restoration services and physical medicine equipment under the Hospital Insurance and Diagnostic Services Program.

TABLE 11

ALLOWANCES FOR THE TOTALLY & PERMANENTLY DISABLED IN CANADA
MEDICAL STATISTICS

Number and Percentage Distribution of Cases Granted Disability Allowances, Medically Rejected
and Deferred Jan. 1959 to Mar. 1960

Category	1955-56	1956-57	1957-58	1958-59	1959-60
Granted	27,222 79.0%	8,866 59.7%	14,067 78.5%	11,430 53.0%	7,153 46.5%
Medically Rejected	6,425 18.6%	5,719 38.5%	3,693 30.6%	9,863 45.8%	7,965 51.7%
Deferred	282 0.8%	171 1.2%	152 0.8%	257 1.2%	280 1.8%
Referred for Rehabilitation*	542 1.6%	101 0.7%			
All Cases	34,471 100%	14,857 100%	17,912 100%	21,550 100%	12,937 100%

*In May 1957, subsection 3 of section 2 of the Disabled Persons Regulations dealing with a favourable rehabilitation prognosis was revoked.

MENTAL HEALTH DIVISION

During the year, the Division, in close co-operation with the provincial mental health services, has continued to promote those developments most likely to lead to an improvement in treatment services.

The need for a sufficient supply of adequately trained professional and technical personnel has continued to constitute one of the greatest challenges. It is encouraging to note that gains are being made in numbers of employed personnel although the supply still falls far short of the need.

On the recommendation of the Advisory Committee on Mental Health, the Division conducted a survey of open door policies in mental hospitals across Canada. Implementing a second recommendation of the Advisory Committee, the Division, in collaboration with the Research and Statistics Division, commenced a very comprehensive survey of psychiatric units in general hospitals with a view to assessing their role in an integral system of treatment facilities for psychiatric patients.

Mental Health Grant

Allocations under the Mental Health Grant for specific projects amounted to \$8,139,680 which was an increase of \$888,167 over the previous year. The following table, showing the distribution of funds, indicates that the trend in allocations has remained essentially the same as in the previous year.

DISTRIBUTION OF FUNDS APPROVED

	1958-59	%	1959-60	%
	\$		\$	
Mental Health Division.....	213,623	2.9	169,997	2.1
Mental Hospitals.....	3,845,568	53.0	4,492,154	55.2
Mental Health Clinics.....	903,788	12.5	1,004,059	12.3
Psychiatric Services in General Hospitals.....	919,567	12.7	846,141	10.4
Training Programs.....	252,979	3.5	295,651	3.6
Bursaries.....	556,667	7.7	594,102	7.3
Research.....	559,321	7.7	737,576	9.1
Totals.....	7,251,513	100.0	8,139,680	100.0

Consultant Services

The Chief of the Division and the consultants in psychology, social work, research, and statistics continued to keep abreast of developments in the provincial mental health programs. The Chief of the Division resigned in the Fall of 1959 and, pending the appointment of a successor, the Director of Health Services personally directed the Division's program.

Through personal contact and correspondence, members of the consultant staff have responded to requests for service from provincial mental health divisions as well as from other divisions in the Department, from other federal departments, and other countries.

Psychiatry

The Chief of the Division visited various provincial mental health programs during the year; attended meetings of the American Psychiatric, Canadian Psychiatric, and American Psychopathological Associations. To observe at first hand the new trends in psychiatric treatment services, he visited mental hospitals and community services in England during which time he also attended meetings of the International Steering Committee for World Mental Health Year which was sponsored by the World Federation for Mental Health. He was active on the Program Committee for the American Psychiatric Association's Mental Hospital Institute and took part in meetings of the North American Steering Committee for World Mental Health Year.

Psychology

The full-time consultant in psychology left the Department at the beginning of the year but a part-time consultant has carried on some of the functions of this position. He visited a number of the provinces in connection with the survey of open door policies and maintained contact with the university departments of psychology.

Social Work

The consultant in social work visited Newfoundland to review social services for psychiatric patients in that area. She also visited a number of Canadian residential treatment centers for emotionally disturbed children in connection

with a survey of such services; the findings are now being compiled in a report. She took part in the Maritime Conference on Social Welfare in Charlottetown at the request of the Organizing Committee, and was invited to attend the White House Conference on Children and Youth.

Research and Statistics

The Consultant in Research and Statistics provided assistance to Verdun Protestant Hospital, Montreal; Hospital for Mental Diseases, Brandon; and the Psychiatric Unit of the Ottawa General Hospital, in collaboration with the Research and Statistics Division, in connection with studies of admissions and discharges.

Visits were made to Saskatoon, Winnipeg, Brandon, Kingston, Montreal, and St. John's to advise on research projects supported under the Mental Health Grant.

A paper entitled "Some Views on the Statistical Design of Experiments" was prepared in collaboration with J. W. Mayne (Operational Research Group, DRB, Department of National Defence) and submitted for publication.

Mental Health Education

With the designation of 1960 as World Mental Health Year, the Division prepared a review of the mental health situation in Canada to be published as a supplement to Canada's Health and Welfare. This publication will also be used as background material with the special World Mental Health Year display which will be exhibited at mental health and other professional meetings.

The script for a film on Mental Hospital Volunteers, to be produced in 1960-61, was prepared in collaboration with Information Services Division and the National Film Board.

One new Child Training Pamphlet "The Brilliant Child" was published and four others "Fear", "Obedience", "Feeding Habits", and "Opportunities for Psychologists in the Mental Health Field" were completely revised.

"Canada's Mental Health", the Division's monthly news bulletin, issued as a complimentary service to professional people in the mental health field, reached a circulation of 5,000—an increase of 1,000 over the previous year.

The Division exhibited mental health displays at meetings of the American Psychiatric Association, the Mental Hospital Institute of the APA, the Canadian Psychiatric Association, and the Canadian Welfare Conference.

Advisory Committee on Mental Health

The full Advisory Committee did not meet during the year but meetings of four Sub-committees were convened in Ottawa—Research, Statistics, Mental Health Education, and Training at which recommendations were formulated for presentation to the full Advisory Committee.

CHIEF NURSING CONSULTANT

Broadly speaking, the functions of the Chief Nursing Consultant are advisory and liaison in nature.

The Chief Nursing Consultant has a direct responsibility to the Deputy Minister of Health to advise him on matters in the general field of nursing in Canada. In other respects, her services are based in the Health Services Directorate and are available to anyone within the Department requiring advice in areas pertinent to nursing. Those areas directly related to the work of the specialist nursing consultants in the Divisions of Occupational Health, Emergency Health Services, Child and Maternal Health, Civil Service Health, and in the Directorate of Indian and Northern Health Services are the direct responsibility of the Directors or Divisional Chiefs concerned.

In addition to liaison with provincial departments of health, the Chief Nursing Consultant has continued, during the past year, to act in a liaison capacity between the Department and the Canadian Nurses' Association, as well as a number of voluntary and official agencies concerned with nursing matters. Representatives of the Canadian Nurses' Association were invited to present their views on urgent nursing matters at the 75th meeting of the Dominion Council of Health in April 1959. This was followed in November 1959 by presentation of a brief by the same group at the first meeting of the Advisory Committee on Hospital Insurance.

In addition to serving on several departmental committees, the Chief Nursing Consultant is a member of: standing and special committees of the Canadian Nurses' Association; the National Advisory Nursing Committees of both St. John's and the Red Cross; the national Committee of Visiting Homemakers of the Canadian Welfare Council; the Advisory Nursing Committee of the University of Ottawa School of Nursing; and the Board of Consultants to the Canadian Forces Medical Council.

The past year has seen an increase in the number of international nursing visitors to Ottawa. In collaboration with the Canadian Nurses' Association, assistance has been given in the planning of their programs and in their entertainment. Included this past year were visitors from Australia, New Zealand, the United Kingdom, Africa, the West Indies, and Denmark.

Miss Eli Magnussen, Chief Nurse in the Ministry of Health of Denmark, who was visiting this Continent under the auspices of a W.H.O. fellowship, spent a week in Ottawa in December 1959. At this time a 3-day Institute on Home Care was arranged in co-operation with the Canadian Nurses' Association and the Victorian Order of Nurses for Canada. Opportunity was also afforded Miss Magnussen to participate in a meeting of principal medical officers and consultants and to speak of home care arrangements in Denmark.

As in former years, senior nursing personnel and other officers of the Department assisted in arrangements for observation programs for postgraduate nursing students from the Universities of Ottawa, Montreal, and McGill, and at professional meetings and short courses. Papers were presented at several of these.

Assistance with evaluation of the nursing aspects of projects submitted by the provinces under the National Health Grants Program continues a major responsibility on a year-round basis.

The Departmental Nursing Committee provides a "forum" for senior departmental nursing personnel who presently have no official organizational link. During the past year this Committee met regularly and there seems to be emerging a pattern of more clear-cut objectives and a more definitive program of activities. This would appear to indicate a greater degree of potential usefulness than was visualized at first.

NUTRITION DIVISION

The functions of the Nutrition Division are to determine the extent of the nutritional problems in Canada, to encourage and support action to overcome these problems, and to contribute towards the maintenance and improvement of the health of the population by the promotion of sound nutritional practices.

Continuous study of the actual state of nutrition of the people of Canada is conducted by an active research program which includes food habit surveys and clinical and biochemical studies of selected population groups. Information and consultant services are provided chiefly through provincial health departments.

Accomplishment of objectives, which it is hoped is reflected in the general health of the people, is indicated by the increasing demand for publications, services, and information. These requests are received from other federal government departments, provincial health departments, non-government groups, physicians and other professional people, and private citizens. The introduction of hospital insurance has increased the demand by provincial authorities for assistance with food service problems.

Research

Reports on nutrition surveys among older citizens, carried out during the previous year in Ottawa and Winnipeg, were completed and submitted to the respective provincial health departments. Two similar surveys were planned and carried out this year in Prince Edward Island and Montreal. The information obtained is now being evaluated. It is hoped that these surveys will provide a basis for improved dietary advice to older people and to young adults for the prevention of the symptoms of aging that are related to nutrition.

The methods used for evaluating quality of diet were reassessed with respect to accuracy of estimations of nutritive value and relative importance of food groups. The results of this study may affect the revision of dietary survey scoring methods.

Laboratory Services

The clinical nutrition laboratory provides a supplementary analytical service unavailable in routine clinical laboratories or provincial health laboratories.

Micro-methods are employed to determine the presence of specific nutrients in finger-prick samples of blood, and in urine. These analyses provide a diagnostic tool for evaluation of nutritional status.

These laboratory services are available to provincial health departments and through them, to all physicians in Canada. During the past year, 353 serum samples and 136 urine samples were submitted for specified analyses and a total of 1,933 tests were performed.

In addition, blood and urine specimens were collected from 188 participants in the old age surveys in Prince Edward Island and Montreal, and 1,504 analyses performed.

In a continuing study of Eskimo nutrition 764 specimens were received and 4,018 tests completed. Samples received during the year totalled 1,023 sera on which 5,533 tests were performed, and 601 urines on which 1,925 tests were completed. (*See Table 12 for breakdown of tests.*)

Investigation is being made of the value of the application of paper chromatographic and high voltage electrophoretic methods to studies of nutritional status.

Experimental Kitchen

With limited facilities, 53 institutional recipes were developed and/or standardized for use by instructors at three refresher courses for cooks from small hospitals and institutions. They will eventually be published as recipe cards.

Development is in progress of a recipe for a biscuit to provide a protein supplement for use in a feeding experiment with a special group of school children. The protein supplement is derived from fish flour provided by the Department of Fisheries. Recipes for three other biscuits, similar to the test biscuit in taste and appearance, are being developed as controls for the study.

A project was carried out on storing, reconstituting and cooking various dehydrated foods to determine their suitability for northern rations.

Education and Information

At the request of provincial departments of health, assistance was given in planning and conducting short courses for cooks in small hospitals and institutions in Prince Edward Island, Nova Scotia, and British Columbia.

On request, the food service in a provincial mental hospital was evaluated and recommendations for improvement were made.

A manual on food preparation for small institutions, entitled "Meals for Serving 50", was completed and is being produced in English. The French version will be printed next year. This manual was prepared at the request of provincial nutritionists and was evaluated by them.

The French version of the film "Mystery In The Kitchen" was produced.

At the request of provincial nutritionists, a poster, "The Third Meal", has been produced in English. The French version will be produced next year.

Booklets, manuals, and other publications of proven usefulness were revised and reprinted for distribution by provincial health departments and/or for sale by the Queen's Printer. The technical bulletin "Canadian Food and Nutrition Statistics

1935-1956", prepared last year, was published. The eight page monthly bulletin "Canadian Nutrition Notes" continued to be published for distribution to approximately 7,000 English and 2,000 French professional people. Close to 1 million pieces of educational literature were distributed during this fiscal year.

The monthly bulletin "Just Between Cooks", which has been prepared for distribution to cooks in Indian residential schools for over 14 years, is now being sent to the hospitals operated by Indian and Northern Health Services as well.

Special articles were prepared for publication in the Manitoba Health Bulletin and the Journal of the Canadian Home Economics Association.

Planning was begun for a two and one-half day course featuring Nutrition Education, to precede the biennial convention of the Canadian Home Economics Association in Edmonton, Alberta, July 1960. The course is especially designed for professionally trained public health workers.

Consultant and Advisory Services

Staff members gave lectures at an Emergency Feeding course at the Civil Defence College, Arnprior, and provided consultation service on emergency food rations.

Civil servants suspected of having health problems of nutritional origin were referred to the Division by nursing counsellors for clinical and biochemical examination and nutritional advice.

Assistance was given to the Health Grants Program in assessment of projects of nutritional concern.

Collaboration continued with other divisions of the Department and with outside agencies in the preparation of pamphlets, radio scripts, and other educational materials in which nutritional information appears.

On request, the Department of Northern Affairs and National Resources and the Department of Transport received advice on ration scales, hostel rations, supplies for food and nutrition classes for adults in the north, purchasing and storage problems, cooks' courses, and the certification of ships' cooks.

The Department of Public Works received assistance in establishing minimum sizes of portions for a standard list of foods sold at fixed prices in government canteens and cafeterias. Also, the food service in a large government cafeteria was evaluated and a report submitted.

On request, provincial health departments received advice on food service, space layout, equipment, and menus for hospitals and a college food service.

The Chief of the Division participated in numerous international nutritional activities during the year, including membership on the Canadian delegation to the Food and Agriculture Organization Conference in Rome and on the Planning Committee for the Fifth International Congress on Nutrition. As chairman of the Wheat Utilization Mission of the Food for Peace Program, he headed its visit to India and Indonesia early in 1960.

Advisory Committees

Canadian Council on Nutrition met in September 1959. Subjects dealt with included: the establishment of a national repository for reports on nutritional investigations; block grants to institutions for the training of nutritionists; dissemination of erroneous nutritional information through radio, television, and printed media; food for emergency feeding (stockpiling, distribution), and food and drug matters. A regulation proposed by the Food and Drug Directorate to provide more definite terms for control of the addition of vitamins to foods was endorsed, as was the plan of the Nutrition Division to arrange a nutrition course on a national basis in 1960. The report of the committee on Revising the Canadian Dietary Standard was adopted.

The Dominion-Provincial Nutrition Committee, composed of a nutritionist from each province and Nutrition Division staff, met in May 1959. Topics discussed included: nutrition education materials and programs, the consumer price index, and scoring food records. A half-day session was devoted to a panel discussion—The Nurse and Nutrition Education.

TABLE 12

NUTRITION LABORATORY SERVICES 1959-60
SERA

Origin	Total Specimens	Vitamin A	Carotene	Vitamin C	Total Protein	Albumin Globulin	Cholesterol	Total Lipids	Hemoglobin
Lab. Service to Physicians and Provincial Health Departments.....	353	323	310	249	224	103	91		121
Old Age Survey (P.E.I.).....	61	61	61	61	61				61
Old Age Survey (Montreal).....	127	127	127	127	127				127
Eskimo (Our Hospital Survey).....	280	280	280	280	280	280	280	280	
Eskimo (From Univ. of Manitoba).....	202	202	202		202	202	202	202	
Northern Affairs.....									
Civil Service Referrals.....									
Totals.....	1,023	993	980	717	894	585	573	482	3,099

NUTRITION LABORATORY SERVICES 1959-60
URINE

Origin	Total Specimens	Riboflavin	Thiamine	Niacin	Sugar
Lab. Service to Physicians and Provincial Health Departments.....	136	130	131	130	121
Old Age Survey (P.E.I.).....	61	61	61	61	
Old Age Survey (Montreal).....	127	127	127	127	
Eskimo (Our Hospital Survey).....	267	267	267	267	
Eskimo (From Univ. of Manitoba).....	15	15	15	15	
Northern Affairs.....	1	1	1	1	
Civil Service Referrals.....					
Totals.....	607	601	602	601	

Total Specimens—1,630
Total Tests —7,458

OCCUPATIONAL HEALTH DIVISION

This Division offers assistance in the organization and development of occupational health services in provincial governments and private industry; carries out research and investigations on occupational health problems; provides specialist, consultative, and technical assistance to provincial governments, municipalities, private industry, and other agencies on matters concerned with occupational disease or injury and atmospheric pollution. It also provides consultative and technical assistance to all Federal Government agencies for the purpose of correcting or improving working conditions which may affect the health of the federal employees.

During the past year, a plan for reorganization of the Division was implemented with slight modifications. Two major units were established within the Divisional structure, namely, the Environmental Assessment Unit and the Biological Unit. The interests of the Division in extra-mural research and development in occupational health services elsewhere in Canada are now co-ordinated by the Senior Scientific Consultant of the Division.

Environmental Assessment Unit

The services of this Unit have been utilized on an increasing scale by provincial governments and federal departments in projects involving the evaluation of environmental hazards in working areas and in the outdoor atmosphere. These projects have dealt with the extent of contamination of mines by dust containing silica, heavy metals, fluorspar, and toxic gases; radiation in mines; surveys of urban air pollution; the composition of diesel exhaust fumes; the separation and identification of polycyclic hydrocarbons, including those of carcinogenic potency in polluted air; industrial hygiene and noise surveys; and other problems affecting the health and safety of workers in industry or of the general public.

An extensive study of the environmental hazards from exhaust gases in railway tunnels, associated with the operation of diesel locomotives under a variety of conditions, has been carried out in co-operation with the Research and Development Division of the Canadian National Railways and the Montreal Road Laboratories of the National Research Council.

A recent investigation of radiation in a fluorspar mine in Newfoundland has revealed unexpectedly high levels of radio-activity in a considerable number of samples due to the presence of radon and its daughter products. The preliminary findings have been communicated to the company operating this mine and to the Newfoundland Department of Health and measures have been taken to reduce or eliminate any potentially hazardous exposures of workers in these mines. This incident poses a unique problem in occupational health and extensive study of conditions found in this mining area is under way.

A systematic study of environmental conditions in mines in Canada has been undertaken by the Division in co-operation with the Mines Branch of the Department of Mines and Technical Surveys, under the direction of a joint planning group. This work includes the assessment of available techniques for the sampling and analysis of airborne dusts and gases, mineralogical, chemical, spectrographic, and X-ray analysis of mine dust samples for silica, heavy metals, and other compounds that may cause lung diseases.

The Division continues to provide specialized services to other federal departments and Crown agencies in connection with industrial hygiene and air pollution surveys, noise, illumination, and ventilation studies.

A total of 497 samples were analyzed by the Chemistry Section during the fiscal year in the assessment of environmental contamination by toxic heavy metals, dust, insecticides, and other pollutants. The Physics Section has determined the silica content of 49 samples of dust and lung and ash by X-ray diffraction for provincial health departments and Workmen's Compensation Boards.

The interest on the part of industry and provincial health departments in the air pollution services of the Division continues to increase. Assistance has been rendered the newly established Air Pollution Control Branch of the Ontario Department of Health in the organization of laboratory facilities and field surveys. Consultant services have also been utilized by the health departments of Nova Scotia, Quebec, Manitoba, Alberta, and British Columbia. Through co-operation with provincial and municipal governments, progress has been made in the development of a national air sampling network. Air pollution data are now being provided from Sydney, Toronto, Windsor, Sudbury, Winnipeg, and Vancouver.

On behalf of the International Joint Commission, the program of smoke measurements and operation of a voluntary smoke abatement regime for Great Lakes' vessel traffic on the Detroit River was continued at the Windsor Laboratory. The Final Report on the Windsor-Detroit Air Pollution Study was presented to the Commission in 1959.

A 200 foot tower equipped with scientific instruments has been installed on the Central Experimental Farm, Ottawa, for the study of the dispersion and diffusion of air contaminants in relation to temperature, wind speed, altitude, and turbulence. This project is being carried on in co-operation with the Research Branch of the Department of Agriculture and the Meteorological Branch of the Department of Transport.

Biological Unit

In addition to providing consultative and other services, the staff of this Unit carries out a program which is directed towards the investigation and study of the biological effects produced in man by deleterious elements which he encounters in his environment. The ultimate objective of the program of this Unit is to improve methods of diagnosis, treatment, and prevention of occupational disease.

Work is continuing on the toxic effects of the organo-phosphorus and other insecticides, particularly with regard to the enzyme response to these toxicants. A new and improved method for the determination of serum cholinesterase in human sera was developed.

Studies of the metabolic transformations of various industrial solvents and carcinogenic agents are continuing. Industrial chemicals known to be carcinogenic are under investigation and emphasis is placed on the biochemistry and morphology of the cellular changes produced by these substances and the biosynthesis of carcinogenic metabolites. A study of the nature, mechanism, and rate of various in-

dustrial chemicals across the placenta and other physiological membranes of laboratory animals is under way and is of significance with respect to employment conditions of pregnant female employees in industry.

The relationship between fatigue and cardiac damage is being studied for the purpose of clarifying some features of industrial fatigue. As a result of work in this field of physiology, improved apparatus for the direct measurement of arterial pressure in laboratory animals has been developed within the Unit.

Upon request of the Province of Newfoundland, a study was designed to investigate an unusually high incidence of cancer of the lung among a group of non-uranium miners. In addition to chemical toxicity and other factors of possible etiological significance, high levels of radiation were discovered during the course of investigation. An occupational mortality study is nearing completion, and other studies are to be implemented shortly.

Nursing Consultant

An active program of providing consultant services to occupational health nurses in industry and provincial health departments was carried out throughout the year. As a result of separate meetings and finally a joint meeting of nursing consultants from the provinces, the programs of the provinces were reviewed and two publications were developed—"A Reference Handbook for Occupational Health Nurses", "A Developing Guide for Nurses in Hospital Employee Health Programs".

The Consultant has assisted in the preparation of a publication entitled "Guide for Counselling and Interviewing" for industrial nurses, through her office as chairman of the Education Committee of the American Association of Industrial Nurses.

Extra-mural Research and Development

The Senior Scientific Consultant of this Division has actively explored the possibility of interesting university departments in carrying out much needed research on problems of occupational health significance. In co-operation with the Director of Industrial Hygiene of the Industrial Hygiene Division of Quebec, the University of Montreal has formulated plans for the development of a special teaching and research branch in occupational health and has utilized the consultant services of world-recognized authorities in this field to ensure sound development.

A comprehensive review of all health grant projects has been undertaken, resulting in a more effective and efficient over-all research and development program in occupational health in Canada.

Contact has been made with several major industries in Canada with a view to exploring the possibility of obtaining additional financial support for extra-mural research in this field.

Educational and Technical Information Services

Information on current developments in occupational health in Canada and elsewhere was published in the "Occupational Health Review" and the "Occupational Health Bulletin" of this Division. Reprints or pamphlets were published

during the past fiscal year on the following subjects as a result of requests from industry or health personnel employed in industry: *Industry and Retirement, The Occupational Health Nurse Specialist, Alcohol and the Impaired Driver, Care of the Hands, Health Teaching in Industry, Occupational Health Nursing as a Part of Public Health Nursing Programs, Garage Health Hazards and Ventilation.*

PUBLIC HEALTH ENGINEERING DIVISION

The activities of the Public Health Engineering Division during the past year have followed a similar pattern to that of other years in relation to problems of sanitation, water supply, and sewage disposal. As a service to other departments investigations to establish the type of treatment facilities amenable to a wide variety of conditions received attention. The work of the Division has continued to reflect the growing concern and interest of various departments of government in the development of those amenities of environmental sanitation so essential to better living. Problems of water supply, sewage disposal, and sanitation in the development of Arctic and other northern communities formed an important part of the year's activities and included examinations at Frobisher Bay, Cambridge Bay, DEW Line projects, Fort Rae, Fort Simpson and outpost nursing stations.

The administration and performance of duties required under certain statutory acts and regulations continued to receive attention on those aspects related to the health of travellers and operating personnel on common carriers. The requirements under the Public Works Health Act and Regulations were examined on Federal projects and of particular interest in this field were the visits to a number of camps associated with the development of the South Saskatchewan Dam. Prominent in the activities of the Division was the work involving the certification of water supplies used at fish processing plants, in co-operation with Department of Fisheries as required under their Specifications 32-GP-14A, for these plants wishing to designate its products "Canada Inspected" or "Processed Under Government Supervision".

Special Projects

Since the Division's activities are spread across the whole of Canada, the scope and diversity of problems encountered in the field of environmental sanitation can best be illustrated through citing some of the special projects carried out during the year.

1. A survey of the watershed in the vicinity of Dartmouth, N.S., at the request of the Department of National Defence (Navy) for the purpose of establishing the type and amount of treatment necessary to provide potable water from the nearby lake at H.M.C.S. Shearwater.
2. A major study of the sewage lagoons serving the Army station at Camp Ipperwash to determine their efficiency and the practicability of this relatively new approach to sewage treatment elsewhere in On-

tario under similar climatic conditions. Much valuable information and basic data for the design of improved installations of this type were secured.

3. A study of the removal efficiency of hydrogen sulphide in the water at the Deseronto Indian Day School where special equipment had been installed. The examination revealed the complete removal of sulphides and coliforms, from the finished water indicating that the equipment was operating satisfactorily.
4. A study to evaluate the use of surface aeration units (mechanical aeration) in the treatment of sewage. Some 320 analytical determinations showed a relatively good reduction in B.O.D. and suspended solids in the range of 84 per cent and 71 per cent respectively for this type of mechanical aeration.
5. Two surveys for the purpose of gathering data required for the design of impounding dams to provide a suitable source of water supply for two Indian Schools at Saddle Lake and Cold Lake both in the Province of Alberta. Engineering plans and specifications covering these projects were later submitted to the Department concerned.
6. The survey to assess the quality of milk served aboard common carriers was continued and expanded to include aircraft. This survey has been instrumental in obtaining some very beneficial results and improvements in processing and handling of milk.
7. Close liaison has been maintained with the various government authorities charged with the responsibility of developing the Townsite at Frobisher Bay. Visits were made to the area to study local conditions principally in respect to the disposal of the effluent from any proposed sewerage system. This is a difficult problem in view of tidal action and ice conditions. The prospect of immense accumulation of sewage during the winter season on the tidal flats in the ice clogged harbour will require extensive study of the behaviour of tidal flows under the ice before any outfall sewer can be definitely located.

Department of Fisheries—Shellfish Control and Fresh Frozen Fish Program

Control of the shellfish industry continued to form an important phase of the Division's responsibilities in those provinces in which shellfish are processed commercially for export. This program is divided into two broad phases, the first related to sanitation, the second to toxicity. These two phases regulate the production, harvesting, and marketing of shellfish and provide control over the areas from which shellfish are taken with respect to level of toxicity. Closure proceedings are taken, when toxicity levels exceed the recommended limits, as a co-operative control measure with the Department of Fisheries. During the past year this program involved examinations of processing and packing plants and sanitary surveys of shellfish growing areas.

The co-operative plant water certification program carried out by the Department of Fisheries and this Department for fresh fish plants under the C.G.S.B.

Specification 32-GP-141A was continued and work commitments involved a greater proportion of field activity than was originally expected. Thirty separate plant water supply sources were surveyed and re-examinations at seven locations were conducted. A further increase in activity in this field can be expected owing to the desire of more and more fish plants to qualify for certification under these specifications.

Department of Northern Affairs and National Resources

NATIONAL PARKS BRANCH

Close co-operation was maintained with the National Parks Branch on matters of mutual concern. Visits to all National Parks were made and special attention was given to the development of new sewerage and disposal systems at Cameron Lake, Kootenay, and Prince Albert. The Elk Lake water supply was studied in relation to the algae problem and methods of treatment required to provide a satisfactory quality of water to meet future demands of the proposed development of this park. Advice was given on the experimental water treatment facilities now under construction to serve the present headquarters area of this park. Subsequent evaluations will be made to determine its suitability as a type of treatment for this water source to permit its use throughout the entire park. Sanitary surveys, water supply, examinations, restaurant sanitation, work camps, and sewage disposal problems continued to form an important part of the assistance rendered to park authorities.

NORTHERN ADMINISTRATION BRANCH

Sanitary surveys were carried out at Cambridge Bay, Tuktoyaktuk, Fort Providence, and Fort Rae on matters pertaining to water supply and sewage disposal problems in the planning of new townsite facilities or improvements in existing sanitary facilities. These surveys, particularly for those communities that have developed over a period of years in a haphazard way, reveal the need for proper sanitary facilities if serious health hazards are to be avoided. It is encouraging to know that in some of these Arctic communities corrective action is being taken to provide adequate facilities such as the sewerage and water projects commenced this past year at Fort Simpson.

Public Works Health Act and Regulations

During the year, under these regulations many work projects were visited including radar sites. The latter visits were made at the request of the administration authorities to provide consultation services on a continuing basis in regard to the operation of water and sewage systems at these stations. Through the use of membrane filter techniques, a control check is maintained on the bacteriological quality of water used for domestic purposes. Samples are also submitted for chemical analysis as part of the control program established.

The construction of the South Saskatchewan Dam under the Prairie Farm Rehabilitation Act involved a number of examinations of work camps and the ground work was laid with respect to the type of sanitary facilities required for these and others that will be established.

Department of Citizenship and Immigration—Indian Affairs Branch

Problems related to water supply and sewage disposal were investigated at a number of Indian schools and hospitals. The work included design of water supply systems at Saddle Lake, Hay Lake Reserve and Cold Lake in Alberta. A new water supply system was designed and alterations made to the sewage disposal system at Fort Vermilion, Alberta. This was carried out subsequent to Peace River water quality studies to determine intake location and degree of treatment required. Unsuitable ground water supplies in three instances required the development of impounding reservoirs or catchment basins on small surface streams.

A number of requests were received and attention given to treatment procedures on new water supply systems. In some instances this has involved field and laboratory study to determine settling characteristics of a particular water, its behaviour under controlled chemical dosages, the efficiency obtained in the removal of suspended solids, colour, and other aspects of water quality control required to produce a potable supply.

International Joint Commission—Air and Water Pollution Activity

Continued interest by active membership on the various Advisory Boards to the International Joint Commission on Control of Water and Air Pollution was maintained.

During the year, a meeting of federal and other interests with representatives from the Ontario Water Resources Commission and the two local Harbour Board Commissions of Toronto and Hamilton was held to discuss control of vessel pollution. The meeting was of a preliminary exploratory nature, called for the purpose of ascertaining the area of responsibility in the administration of existing control regulations, the extent of such regulations, and the effectiveness of present control measures on the discharge of sewage, garbage and refuse from vessels.

Other activities included a re-survey of the St. Croix River Boundary Waters between New Brunswick and Maine to assess the pollutional loadings on the river as compared with the findings of the 1956 survey. The current findings show a substantial increase in the pollution load contributed to this river.

Studies under the Rainy River pollution reference now before the International Joint Commission are planned to commence in the Summer of 1960. The members of the Technical Advisory Board for this reference have been appointed and several organizational meetings have already taken place.

Department of Public Works

Close liaison with the Architectural Branch of the Public Works Department was maintained on matters of water supply, sewage disposal, and its treatment. This involved review of plans, examinations, and consultation in the building program associated with residential schools, R.C.M.P. barracks, customs and immigration centres, Post Office, and other federal buildings across Canada. The Division has also been associated with this Department in its control of the operation of

cafeterias and canteens in public buildings in respect to health and sanitation requirements and in certifying the layout plans prior to revision of existing eating establishments or where new services are planned.

Department of National Defence

A study of the water supply at the R.C.A.F. Station, Moisie, Quebec, was made by the Regional Engineering Staff at Montreal to determine suitable treatment procedures, plant changes, and additions to the existing treatment plant to produce an acceptable water. A high iron content and low filtration capacity presented certain difficulties which necessitated a laboratory study on the site to establish treatment procedures and plant changes required.

Service and advice were also given through examinations of 30 water supplies and 40 sewage disposal systems. Some of these were of a routine character, others involved a detailed appraisal report.

Provincial Co-operation

Close co-operation and liaison was maintained with provincial departments of health, or control agencies on matters pertaining to public health which are of mutual interest. Consultation services and assistance was provided to the Prince Edward Island government, at their request, on proposed municipal sewerage systems. This involved field investigations, review of plants and advice on the type of sewage treatment and location of plant outfall in relation to economic and public health interests.

Educational Services

During the year, the engineering staff of the Division participated in a number of lecture courses. These included lectures given to those attending courses for sanitary inspectors, swimming pool operation, and restaurant operation in two of the western National Parks.

The Maritime engineers again repeated the lecture series on water supplies and waste disposal at conferences of Fishery Inspection Officers.

In Ontario and Quebec, Marine School lectures were continued and assistance was rendered through participation in emergency feeding courses at the Civil Defence College at Arnprior in lectures on water supply and sanitation.

Regional and district engineers were called on to participate in local area educational programs which included talks on water pollution, sanitation, and other aspects of public health engineering.

Several members of the staff took advantage of the opportunity to attend special courses at the United States Public Health Service, Robert E. Taft Educational Training Centre at Cincinnati, Ohio. One member was afforded leave to attend Berkeley College, California, to take postgraduate studies.

One paper was published in the "Professional Engineers Journal" and the publication of the monthly news bulletin "Public Health Engineering in Canada" was continued on behalf of the Advisory Committee on Public Health Engineering.

Research in the North

A research engineer was employed to review and appraise existing water and sewage treatment methods presently utilized in northern communities. The ground work was laid for future studies on possible locations for experimental sewage disposal units. Literature studies of sewage disposal methods and other sanitation practices in other countries, including Russia, were carried out and reported upon. This work will be continued when a replacement is found for the present incumbent who is terminating his employment with the Department at the end of this fiscal year.

Laboratory Services

The demands on the laboratory services at Ottawa have continued on a marked upward trend. Fortunately, with the addition of a technician to the staff it was possible to meet all commitments.

During the year, programs were established to provide chemical analyses of all water supplies serving DEW Line and R.C.A.F. stations. In addition, there was a steady flow of requests for analyses from the maritime and eastern districts and from other federal departments.

Based on laboratory scale studies, treatment procedures for specific water supplies were suggested to effect iron removal, colour removal, and corrosion control. Operating efficiency evaluations were also carried out on various sewage treatment plants.

The new quarters now provided for the regional office at Vancouver includes space for laboratory services. Formerly, the facilities of the Food and Drug Laboratory were utilized by the Division's chemist. The many requests for analytical data from the Prairie and Pacific Regions reflect the importance of this laboratory service.

Field Work Summary

In all, 798 sanitary surveys of water supplies, ice supplies, natural and artificial, and shellfish growing areas and shucking plants, were conducted. A total of 7,463 water samples, 141 ice samples, 889 milk samples, and 360 sewage effluent samples were collected for analysis. Some 806 examinations were made of railway property including stations, restaurants, dining cars, bunkhouses, mobile work camps, coachyards, yard offices, and switchmen's shanties.

A total of 190 examinations were made to check the operation of sewage and waste treatment plants and 430 examinations of water supply and treatment facilities. In connection with these and special pollution investigations, over 700 samples were collected and submitted to the Division's laboratories for chemical analyses. This work involved approximately 6,000 determinations.

During the year, 232 vessels' water systems were examined for compliance with the statutory regulations including seven new vessels under construction in Canada for which plans were submitted to this Division for review along with plans of three ships under construction in foreign shipyards.

RADIATION PROTECTION DIVISION

During 1959, the organizational structure of the Radiation Protection Division was reviewed with a view to improving operational efficiency. The activities of this Division have now been separated into three distinct functions: Administrative Services, Medical Services, and Technical Services.

At the present time, with the exception of one or two statistical studies, the activities of the Medical Services group are mainly consultative and advisory. This group has also participated in a study by the British Medical Research Council to determine the incidence of leukemia in patients treated with radio-active iodine for thyrotoxicosis.

Activities in the Technical Services section are broadly segregated under the headings: Isotope and X-Ray Utilization and Safety, Radio-Active Fallout, and Safety of Nuclear Reactors and Devices.

The over-all staff of the Division was increased by five technicians and two clerks to cope with the expanded technical program.

Isotope and X-Ray Utilization and Safety

As advisers to the Atomic Energy Control Board, the Radiation Protection Division has continued to review all applications for licence to procure radio-isotopes. Approximately 560 applications were processed during 1959. A review is made of all applications with regard to the training and experience of the user, the isotope and quantity applied for, the use to which the isotope is to be put, the facilities available for safe handling, the proposals for radiation monitoring, and the method of waste disposal. In addition, when isotopes are to be used clinically, the application is further reviewed by the Department's Advisory Committee on the Clinical Uses of Radio-Isotopes.

Subsequent to radio-isotope licensing, regular inspection of facilities is carried out to check on handling methods, monitoring procedures, waste disposal, and records. Approximately 120 inspection visits were made in 1959 to isotope users.

In addition to the field inspections, a continuous check on operating conditions is maintained through the Radiation Protection Division's Film Monitoring Service. This service is also provided upon request to all persons working with X-ray sources. By the end of 1959, the film service was supplied on a fortnightly basis to approximately 10,000 radiation workers in Canada.

During 1959, drafting of new health and safety precautions for atomic energy workers was completed. The Radiation Protection Division recommended to the Atomic Energy Control Board that these new precautions be included as part of the Atomic Energy Control Regulations. Under these Regulations, the Radiation Protection Division will act jointly with provincial health departments as the health authority in all matters relating to the health of atomic energy workers.

The problems of providing supervision of the safe use of X-rays have received preliminary consideration during 1959 through discussions with such groups as the Canadian Association of Radiologists.

A special problem which arose during 1959 concerned the use of strontium-90 as a luminizing agent in the paint of certain watch dials. A number of watches

were examined in the Division's laboratories. A joint press release by this Division and the Atomic Energy Control Board drew this matter to the attention of the public. Arrangements were made, with the co-operation of the Ontario Department of Health, to have the manufacturer replace the strontium-90 painted part.

Radio-Active Fallout

The collection of monthly milk powder samples from a network of powdering plants throughout Canada continued in 1959. These samples were analysed for strontium-90. An annual report covering the results in 1958 and quarterly statements of measurements during 1959 were published and distributed to the public.

In co-operation with the Meteorological Services Branch, Department of Transport, a new network of sampling stations was established for the routine collection of air samples on a daily basis and precipitation samples on a monthly basis. Sample collection began towards the end of 1959 but no report has yet been published. These samples are analysed for total beta activity.

The collection of human bone specimens was also continued during 1959. These samples were analysed for strontium-90 and the first report on this project will appear in 1960.

In November 1959, the General Assembly of the United Nations unanimously passed a resolution calling for further studies and international co-operation concerning the effects on man of atomic radiation. The Radiation Protection Division was given the responsibility of carrying out Canada's contribution to the United Nations' request. Plans have been prepared to provide facilities capable of analysing samples of air, precipitation, soil, and food from 20 to 25 foreign stations.

Safety of Nuclear Reactors and Devices

The Radiation Protection Division participated in the discussions of the Atomic Energy Control Board's Reactor Safety Advisory Committee which keeps a continuing watch over the safe design and operation of nuclear reactors. During 1959, the McMaster University reactor was granted a provisional licence to operate under certain restricted conditions. Safety features of the NPD-2 prototype power reactor were carefully reviewed. The siting of the proposed CANDU reactor at Douglas Point on Lake Huron was approved.

Other activities in this field included co-operative studies with other government agencies in establishing procedures for exercising control over possible visits by nuclear ships and assessing the proposed use of nuclear explosives for oil recovery from the Alberta tar sands.

MEDICAL ADVISORY SERVICES

CIVIL AVIATION MEDICINE DIVISION

The Civil Aviation Medicine Division has completed its fourteenth year in providing to the Department of Transport Air Services, other government departments, and associated agencies advice on medical problems relating to the health, safety and comfort of aircrew, groundcrew, and airline passengers.

Advice regarding the maintenance of adequate medical standards for civil aviation personnel licensed by the Department of Transport is a prime responsibility. The medical examinations, which are conducted by designated physicians, are assessed by medical officers in the Regional Offices. The Regional Medical Officers are assisted in the assessments by the Regional Medical Consultant Boards. More than 26,000 medical examinations and 2,400 electrocardiograms were assessed. The rapid expansion of civil aviation and the changing requirements in air transportation have required continued study in the establishment and application of the medical requirements.

The Division continues active in the dissemination of information in Aviation Medicine. Two day refresher courses were conducted in three Department of Transport Regional Offices for civil aviation medical examiners. In addition a conference was held for the Regional Medical Officers.

Progress has been made in the revision of medical examination report forms and the method of recording and analysing disabilities in aircrew personnel. The medical aspects of aircraft accidents are related to this work.

Although the Division is not responsible for conducting research, close liaison is maintained with the National Research Council, the Defence Research Medical Laboratories, the Royal Canadian Air Force Institute of Aviation Medicine, and the Department of Transport on the subjects related to Civil Aviation Medicine.

The establishment of adequate pre-employment medical standards for selected groups in the Department of Transport, Air Services, was continued. The responsibility for the assessment and taxation of the pre-employment medical examinations has been delegated to the Regional Medical Officers.

CIVIL SERVICE HEALTH DIVISION

For the past 13 years, this Division has operated a comprehensive occupational health service program for the promotion and conservation of the health of civil servants and other federal government employees. Although the past year has witnessed no major changes in policy or administrative practices, the Division has been called upon to meet increasing demands for clinical and advisory services from government departments with personnel and dependents proceeding either abroad or to northern or isolated regions. In particular, the services afforded the Departments of External Affairs and Trade and Commerce can be expected to increase in volume as long as additional foreign service personnel are required to staff new overseas missions or expand existing ones. Apart from this major commitment, the work of the Division has become well consolidated and stabilized.

As in previous years, the Division has allied itself with and contributed further to the development of effective community resources. The full and intelligent use of the services provided by these agencies contributes to the over-all efficiency and morale of the Public Service.

Personnel

The Division's establishment remained unchanged during the year at 82 personnel in all—six medical officers including a psychiatrist, a psychologist, a consultant in social services, a supervisor of nursing counsellors and her assistant, 48 nursing counsellors and 24 ancillary personnel.

For the past 18 months, this Division has been without the services of a consultant in social services, with the result that senior nursing counsellors have had to assume increasing responsibilities in this area, and the welfare aspects of the program have not been exploited to the full.

Towards the end of the fiscal year, one of the senior medical officers with special training in ophthalmology was appointed Chief of the Blindness Control Division. An arrangement will be made for this officer to continue to act as a part-time consultant to this Division enabling him to conduct eye examinations and assessments on employees engaged in work demanding a high standard of visual efficiency.

Early in the fiscal year, one of the senior nursing counsellors was seconded to the World Health Organization for a two-year period as a Regional Public Health Nursing Consultant to the West Indies. Retirements, transfers, and marriages among nursing counsellor staff have resulted in an unusually large turnover. No less than seven of our staff have been replaced by the recruitment of well-qualified Public Health nurses.

Administration

Advisory, diagnostic, and emergency services have been administered through the Health Centre to more than 36,000 federal government employees and nursing counsellor service through 24 full-time and four part-time Health Units to more than 32,000 employees in the Ottawa area. Furthermore, an advisory service has been provided to departments for employees located outside Ottawa on matters relating to health and welfare. The Division arranges, where necessary, essential medical examinations and consultations utilizing the clinical facilities of other Divisions of this Department, the Department of Veterans Affairs, or private physicians on a fee-for-service basis.

Health Centre Services

A detailed breakdown of clinical services performed at the Health Centre for the year under review is presented in Table 13. Referrals from nursing counsellors rate top priority followed in turn by obligatory medical examinations required by statute and periodic voluntary examinations requested by departments for special employee groups. These groups include employees and cases where an estimate of physical fitness for the job is required. Reference has been made to the substantial services undertaken on behalf of foreign service personnel and their dependents prior to and on returning from overseas posting. In this connection, the Immigration Medical Officer based in New Delhi for the past two years has continued to furnish recommendations and advice on personal and

environmental health matters affecting foreign service personnel in overseas missions in South East Asia. He has been successful in making satisfactory arrangements for the appointment of local health advice to the High Commissioners in New Delhi and Karachi. The duties of these health advisors, in brief, will be to advise the High Commissioner on prevalent health hazards and epidemics together with measures for their control; to provide new arrivals with essential health information on living in the tropics; to assist in the selection and supervision of domestic servants; to maintain and keep up-to-date a register of inoculations for Canadian personnel; and, as necessary, to conduct periodic inspections on the sanitary conditions of existing servants' compounds.

From Table 13, it will be noted that 3,753 immunization procedures in all were administered to 2,034 individuals at the Health Centre, mainly to foreign service personnel and their dependents proceeding abroad or to employees whose duties take them to isolated areas. Some 367 vaccinations against poliomyelitis have been administered, the majority to children of foreign service personnel proceeding abroad. The Division co-operated with the City of Ottawa Health Department in the implementation of their program for establishing adult immunization clinics.

The psychiatrist and psychologist have worked to full capacity with the demand for both psychiatric and psychological assessments increasing each year. Almost 40 per cent of the psychologist's interviewing time is required for his work with foreign service employees, the remainder being devoted chiefly to referrals from health units, the clinical staff at the Health Centre or departmental personnel officers. Both the psychiatrist and psychologist have contributed greatly to the development of an effective mental health program for federal government employees. This program has been enhanced in particular by the psychiatrist who has established a close working relationship with departmental personnel officers, encouraging them to visit the Health Centre for a frank discussion of their employee problems wherever possible before they assume serious significance. Departments in general and the Civil Service Commission are becoming increasingly aware of the value of these consultant services in the solution of a wide variety of personnel problems having an emotional origin.

The Certificate Review Section moved to new quarters in No. 1 Temporary Building at the close of the fiscal year. It continues to function as an integral part of the Health Centre. A total of 96,895 certificates of disability for duty and 10,438 physical examination record forms were reviewed and processed. The Section arranged for 411 medical examinations outside Ottawa, mainly for Colombo Plan assignees, extension of employment beyond the age of 65, confirmatory examinations in connection with retirement from the service on medical grounds, and examinations for assessment of physical fitness for job suitability at departmental request. This marks the second year in which the annual statistical report on "Illness in the Civil Service" compiled from sick leave certificates by the Public Health Section of the Bureau of Statistics has been published on a calendar rather than a fiscal year basis.

Table 14 summarizes the retirements from the service on medical grounds according to disability for the year 1959-60.

Health Unit Services

Table 15 lists the 24 full-time and four part-time health units in operation at the close of the fiscal year by location and number of personnel supervised. Early in the year a new one-nurse unit was established in the Neatby Memorial Building (Science Survey) at the Experimental Farm and later, a two-nurse unit in the Geological Building on Booth Street to serve all employees of the Department of Mines and Technical Surveys in that area. This latter unit replaced the former small unit located in the Mines Branch Building. With the completion of renovations to the Jackson Building following the explosion in October 1958, health unit services were re-established. Plans are well advanced for the opening of two additional units in the Riverside Drive area, one for the new Public Works Administration Building and the second for the Post Office Building. It is expected that these two units will service all government employees who will subsequently be located in the group of buildings planned for this area.

Table 16 presents a detailed summary, by months, of the services performed in the health units for the fiscal year, 1959-60. Health teaching, counselling, and first aid services have been rendered to almost 30,000 civil servants by the 24 full-time units. This gives an "index of participation" of 55 monthly visits per 100 personnel supervised. An additional 6,000 employees receive emergency health services or part-time coverage.

Staff Education

The "Work Sampling Study", undertaken early in 1959, designed to evaluate the function of the nursing counsellor service was completed during the year under review. This intensive survey constitutes a pioneering effort in scientific research in this field. A brief report has been prepared for publication in the April 1960 issue of the "Canadian Nurse Journal". A more detailed account is in the hands of the printer and will be available to outside agencies interested in conducting similar evaluation studies. The findings of this study have been most carefully analysed and have formed the subject matter of regular staff conferences held during the year. As expected, the survey has directed attention to certain areas where improvements in over-all efficiency of health units administration could be achieved. Specific proposals have been adopted, wherever possible, for reducing the time spent on records, increasing the time available for health teaching and counselling, and streamlining of unit activity with more efficient handling of daily workloads.

Another highlight has been the inauguration of orientation classes for new nursing counsellors in which the basic principles and concepts of the service are set forth, demonstrations arranged, and the appropriate use of records taught and practised. A teaching manual for indoctrinating new nurses has been prepared and these classes now constitute an integral part of our educational program.

Special Activities

The Division has continued to give leadership to the program for combating alcoholism in the Federal Civil Service. The psychiatrist has maintained close liaison with the Civil Service Commission and departmental personnel officers advising them on the course of action to be followed in individual cases as they are brought to light.

During the year, revision of the "Nursing Counsellors' Procedure Manual" was completed. New procedures and policies have been incorporated in the new edition and the up-to-date manual is now available for our own use as well as on request to outside professional groups.

The Division continues to extend its facilities to undergraduate medical students from the University of Ottawa and to Public Health Schools of Nursing for field training. The nursing counsellor staff continues to co-operate with nursing and other professional groups in maintaining standards of care and are encouraged to keep abreast of modern trends in the Public Health Nursing field. Members of the staff hold executive positions in the Ontario Nursing Association at District and Chapter levels and membership on the Health Planning Committee of the Ottawa Welfare Council.

TABLE 13

(Civil Service Health Division)
HEALTH CENTRE STATISTICS
Fiscal Year 1959-60

Number of Visits		
Total		7,607
First visit	3,336	
Repeat visit	4,271	
Visits by Sex		
Total		7,607
Male	5,193	
Female	2,414	
Analysis of Visits		
Physical Examinations		2,643
Pre-employment, periodic, P.S.S.A.	548	
Foreign service, isolated duty, postings, etc.	528	
Referrals—voluntary, department, health unit, etc.	1,567	
Consultations, Interviews, etc.		4,844
Psychological	780	
Psychiatric	454	
Special, eye, X-ray, immunization	3,610	
Accidents		120
Industrial	24	
Non-industrial	96	
Immunizations		
Total number of employees immunized		2,034
Total immunizations		3,753
Smallpox	955	
T.A.B.T.	898	
T.A.B.	450	
Cholera	298	
Typhus	104	
Yellow Fever	654	
Polio (Salk)	367	
Other	27	
Disposal		
Total		7,607
Returned to work	7,538	
Sent home	69	
Referred to Family Physician		113
Total Laboratory Procedures		3,939
X-Ray		
Total		4,198
Chest	2,408	
Chest (photoroentgen unit)	1,409	
Other	381	

TABLE 14

(Civil Service Health Division)

RETIREMENTS FROM SERVICE—ACCORDING TO DISABILITY

Fiscal Year 1959-60

Male, 157—Female, 63—Total, 220

Cause of Disability	Age Groups					
	Under 40	40 to 44	45 to 49	50 to 54	55 to 59	Total
Infective and Parasitic.....	0	0	1	1	4	6
Neoplasms.....	3	2	2	2	5	14
Allergic, Endocrine Metabolic, Nutritional	1	0	2	2	2	7
Blood and Blood Forming.....	0	0	0	0	0	0
Mental Psychoneurotic Personality.....	5	6	7	9	12	39
Nervous Systems and Sense Organs.....	2	6	3	6	20	37
Circulatory.....	1	5	4	17	36	63
Respiratory.....	0	2	3	0	2	7
Digestive.....	0	1	2	2	7	12
Genito-Urinary.....	1	1	0	0	3	5
Pregnancy, Childbirth.....	0	0	0	0	0	0
Skin and Cellular.....	0	0	0	0	0	0
Bones and Organs of Movement.....	0	0	3	4	15	22
Congenital Malformation.....	0	0	0	1	0	1
Symptoms and Ill Defined.....	0	0	4	0	2	6
Accidents and Results of Old Injuries.....	0	0	1	0	0	1
Total.....	13	23	32	44	108	220

TABLE 15

(Civil Service Health Division)

HEALTH UNIT LOCATIONS

Health Unit No.	Locations	Total Personnel Supervised by Units
1	No. 2 Temporary Building	2,722
2	Citizenship Building	1,024
3	No. 8 Temporary Building	1,202
*3A	Plouffe Park (1 day only)	163
4	Trade & Commerce Building	767
5	Metcalfe Building	895
6	"C" Building, National Defence	3,957
7	Geological Building, Booth Street	1,297
8	Jackson Building Annex	1,508
9	Hunter Building	1,930
10	No. 6 Temporary Building	1,033
11	D.V.A. Memorial Building	1,364
12	Bureau of Statistics	3,106
13	Victoria Island	700
14	Connaught Building	1,100
15	Blackburn Building	2,462
*16	Daly Building (afternoons only)	875
17	National Research Council (Sussex St.)	840
18	National Research Council (Montreal Rd.)	1,381
*18A	National Research Council, Radio Bldg., Montreal Rd. (morning only)	331
*18B	Rideau Annex Bldg., Alta Vista Drive, (1 day only)	513
19	Defence Research Board (Shirley Bay)	513
20	Confederation Building	2,386
21	No. 10 Cottage Row, Rockcliffe	1,418
22	No. 5 Temporary Building	725
23	75 St. Patrick St. (Old Printing Bureau)	470
25	Neatby Memorial Bldg. (Carling Ave.)	1,450
TOTAL.....		36,132
*	Part Time	

(Civil Service Health Division)
HEALTH UNIT STATISTICS
By Months, Fiscal Year 1959-60

	Total	April	May	June	July	August	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	March
Number of Personnel Under Supervision.....	.....	33,119	32,969	33,065	34,220	34,149	34,506	34,722	34,381	34,507	34,564	35,054	36,132
Number of Health Units in Operation.....	.....	23	23	23	24	25	25	25	25	25	24	24	24
Number of Visits													
Total.....	196,690	17,554	15,348	16,961	15,186	14,606	16,495	17,923	15,434	16,299	16,022	16,592	18,270
First visit.....	147,249	13,360	11,417	12,682	11,439	11,006	12,438	13,499	11,644	12,143	11,933	12,415	13,273
Repeat visit.....	49,441	4,194	3,931	4,279	3,747	3,600	4,057	4,424	3,790	4,156	4,089	4,177	4,997
Visits by Sex													
Total.....	196,690	17,554	15,348	16,961	15,186	14,606	16,495	17,923	15,434	16,299	16,022	16,592	18,270
Males.....	93,920	8,336	7,269	7,812	7,359	6,990	7,816	8,613	7,467	7,715	7,658	8,014	8,871
Females.....	102,770	9,218	8,079	9,149	7,827	7,616	8,679	9,310	7,967	8,584	8,364	8,578	9,399
Nature of Visits													
Total.....	196,690	17,554	15,348	16,961	15,186	14,606	16,495	17,923	15,434	16,299	16,022	16,592	18,270
Illness.....	80,519	7,103	6,242	6,982	6,484	6,099	6,825	7,409	6,076	6,560	6,438	6,523	7,778
Accident.....	14,793	1,186	1,196	1,337	1,357	1,119	1,112	1,105	1,150	1,341	1,280	1,181	1,429
Consultations.....	18,467	1,506	1,727	1,852	1,561	1,382	1,530	1,502	1,549	1,264	1,427	1,623	1,544
Return-to-work visits.....	82,911	7,759	6,183	6,790	5,784	6,006	7,028	7,907	6,659	7,134	6,877	7,265	7,519
Classification of First Visits													
Total.....	147,249	13,360	11,417	12,682	11,439	11,006	12,438	13,499	11,644	12,143	11,933	12,415	13,273
Respiratory.....	44,395	5,429	3,076	2,373	1,591	1,761	3,603	5,615	3,696	4,058	4,169	4,212	4,812
Digestive.....	23,534	1,615	1,705	2,368	2,581	2,834	2,151	1,566	1,540	1,906	1,671	1,732	1,865
Skin and cellular.....	9,053	712	835	1,084	1,163	893	802	651	621	588	510	572	622
Menstrual disorders.....	6,558	516	582	682	554	527	551	519	547	573	482	498	527
Emotional disorders.....	2,131	181	159	194	184	167	170	217	200	154	168	163	174
Contagious diseases.....	144	10	4	10	6	4	8	2	4	13	20	25	38
Accidents—non-industrial.....	6,965	496	610	653	677	546	517	508	553	602	573	569	661
Accidents—Industrial.....	5,206	475	411	489	402	375	376	406	468	455	415	443	491
Ill defined and all others.....	49,263	3,926	4,035	4,829	4,281	3,899	4,260	4,015	4,015	3,794	3,925	4,201	4,083
Disposal													
Total.....	196,690	17,554	15,348	16,961	15,186	14,606	16,495	17,923	15,434	16,299	16,022	16,592	18,270
Sent home.....	5,550	614	407	420	421	428	462	545	349	426	454	419	605
Returned to work.....	191,140	16,940	14,941	16,541	14,765	14,178	16,033	17,378	15,085	15,873	15,568	16,173	17,665
Referrals													
Total.....	11,741	1,007	1,025	1,062	947	1,039	999	1,032	926	903	907	943	951
Referred to Health Centre.....	2,151	198	240	206	174	182	183	162	159	128	181	184	154
Referred to family physician.....	8,649	756	720	788	688	751	741	815	694	668	653	677	698
Referred to community agencies.....	941	53	65	68	85	106	75	55	73	107	73	82	99
Index of Participation													
Average monthly number of health unit visits per 100 personnel supervised (full time).....	55												

QUARANTINE, IMMIGRATION MEDICAL AND SICK MARINERS SERVICES

Introduction

Health and treatment services dealing with international traffic are grouped, for administrative purposes, under Quarantine, Immigration Medical and Sick Mariners Services, which administers the Quarantine Act and Regulations; the Leprosy Act; Part V of the Canada Shipping Act and, by the authority of other statutes and orders-in-council, is responsible for the medical examination and treatment of immigrants and the periodic medical examination of seafarers employed on ships of Canadian registry or Canadians employed on ships of foreign registry.

A variety of miscellaneous activities at field offices include the medical examination and immunization of harbour and river pilots and government employees appointed to serve in remote areas, and the medical examination of civil servants on request of the Civil Service Health Division.

Medical facilities are maintained in all major seaports and airports in Canada, in 21 centres in the British Isles and Continental Europe and, during the past fiscal year, at one centre in Asia.

Quarantine Service

The Quarantine Service functions under the authority of the Quarantine Act and Regulations to reduce the hazard of the introduction of quarantinable diseases into Canada by way of international traffic. The inspection, immunization, vector control, and other measures applied to such traffic are in accordance with the International Sanitary Regulations of the World Health Organization of which organization Canada is an active member. The major quarantinable diseases are: smallpox, plague, typhus, relapsing fever, yellow fever, and cholera. They exist in endemic and epidemic proportions in diverse areas of the world. Due to effective control measures, no cases of quarantinable diseases were introduced into Canada during the year under review.

In the fiscal year 1959-60, 4,178 vessels and 15,963 aircraft, carrying a total of 1,280,459 persons, were inspected at organized quarantine stations at seaports and airports. Of this number, 900,107 were passengers, 380,288 were crew members and 64 were stowaways and other miscellaneous persons. At unorganized ports, local customs officers, acting in the capacity of quarantine officers, reported the entry of an additional 740 vessels carrying a total of 34,577 persons. Further details of inspections are shown in Table 17 "Ships Boarded by Quarantine Officers" and Table 18 "Ships Inspected at Unorganized Ports", also Table 19 "Inspection of Aircraft Subject to Quarantine".

Smallpox

Smallpox continues to be the most important quarantinable disease from a control point of view. Over 270,000 cases were reported throughout the world during the year, with major epidemics occurring in Asia, Africa, and South American countries, while sporadic outbreaks were reported in Europe.

TABLE 17

(Quarantine Service)

SHIPS BOARDED BY QUARANTINE OFFICERS

Organized Quarantine Stations

1959-60

Station	Vessels Inspected	Personnel Inspected				Port Totals
		Crew	Passengers	Stowaways	Others	
Halifax, N.S.....	717	65,895	52,623	3	6	118,527
Saint John, N.B.....	333	13,853	1,155		11	15,019
Quebec, P.Q.....	2,499	146,661	104,500	25	16	251,202
William Head, B.C.....	629	34,590	14,379	2	1	48,972
Totals.....	4,178	260,999	172,657	30	34	433,720

TABLE 18

(Quarantine Service)

SHIPS INSPECTED

Unorganized Ports

1959-60

Station	Vessels Inspected	Personnel Inspected			Total Personnel Inspected
		Crews	Passengers	Stowaways	
Argentia, Nfld.....	2	76			76
Bay Roberts, Nfld.....	3	65			65
Bell Island, Nfld.....	104	4,463	46		4,509
Botwood, Nfld.....	12	461			461
Campbellton, N.B.....	1	27			27
Churchill, Man.....	57	2,000	13		2,013
Corner Brook, Nfld.....	20	1,009	13		1,022
Dalhousie, N.B.....	29	1,175	17		1,192
Digby, N.S.....	1	35			35
Gaspe, P.Q.....	2	435	474		909
Grand Falls, Nfld.....	32	845			845
Harbour Buffett, Nfld.....	2	28			28
Harbour Grace, Nfld.....	26	476			476
Kitimat, B.C.....	9	341	2		343
Louisburg, N.S.....	2	118			118
Lunenburg, N.S.....	2	109			109
Sydney, N.S. (including North Sydney)....	76	3,712	9	1	3,722
Ocean Falls, B.C.....	8	286			286
Parrsboro, N.S.....	2	47			47
Port Alberni, B.C.....	8	262			262
Port Alice, B.C.....	7	307	5		312
Port Hawkesbury, N.S.....	5	82			82
Port McNeil, B.C.....	2	99			99
Prince Rupert, B.C.....	13	454			454
Quatsino, B.C.....	10	480	10		490
St. John's, Nfld.....	300	14,710	1,746		16,456
Tahsis, B.C.....	2	60			60
Wolfville, N.S.....	3	79			79
Totals.....	740	32,241	2,335	1	34,577

TABLE 19
(Quarantine Service)
INSPECTION OF AIRCRAFT SUBJECT TO QUARANTINE
1959-60

Airport	Number of Aircraft	Number of Crew	Number of Passengers	Total Persons
Calgary, Alta.....	1	11	50	61
Dorval, P.Q.....	3,639	30,922	166,605	197,527
Edmonton, Alta.....	117	1,142	6,880	8,022
Frobisher, N.W.T.....	149	1,057	7,841	8,898
Gander, Nfld.....	7,123	56,111	339,826	395,937
Goose Bay, Nfld.....	1,019	8,077	51,605	59,682
Halifax, N.S.....	5	55	239	294
Malton, Ont.....	624	3,433	24,608	28,041
Moncton, N.B.....	69	565	3,225	3,790
Ottawa, Ont.....	48	411	1,414	1,825
Sea Island, B.C.....	2,414	12,680	99,681	112,361
Sidney, B.C.....	9	68	408	476
Stephenville, Nfld.....	77	620	2,994	3,614
Sydney, N.S.....	249	2,033	12,602	14,635
Trenton, Ont.....	19	164	175	339
Windsor, Ont.....	2	11	33	44
Winnipeg, Man.....	399	1,929	9,264	11,193
Totals.....	15,963	119,289	727,450	846,739

Immunity acquired as a result of vaccination remains Canada's major defence against the introduction of smallpox. All persons arriving or returning to Canada from abroad are required to present evidence of successful vaccination or revaccination carried out within the three years immediately preceding arrival. Unvaccinated arrivals who have not been recently exposed to smallpox may be ordered to report to the Medical Officer of Health at their destinations in Canada for daily surveillance during the incubation period of the disease. Persons arriving directly from the United States (including Alaska and Hawaii), Greenland, Iceland, St. Pierre and Miquelon, Bermuda, Cuba, Jamaica, the Bahamas, the Virgin Islands, Puerto Rico, and the Panama Canal Zone are exempted from the vaccination requirements. During the year, approximately 1,282,000 persons arrived possessing valid vaccination certificates. Four hundred and thirteen persons refused vaccination and were placed under surveillance.

Plague

Bubonic plague results from the bite of the infected rat flea. The most common reservoir of infection is the rat. International control measures carried out by all member nations of the World Health Organization have resulted in progressive and impressive reduction in rat populations on ships. All vessels subject to quarantine are routinely inspected for rat harbourage and infestation. These conditions, when found, are corrected by ratproofing, fumigation, and trapping procedures. Vessels which, on inspection, are found to be rat free are issued international exemption certificates valid for up to six months. During the year, small outbreaks of plague occurred in South America, Asia, and Africa, emphasizing the continuing importance of maintaining effective control measures.

Typhus and Relapsing Fever

All persons arriving from areas where typhus and relapsing fever are endemic are carefully examined for lice which are the vectors of these diseases. Facilities are maintained at all major seaports and airports for the rapid delousing of persons exposed to this disease or who show evidence of infestation with lice.

Cholera

Cholera exists in endemic and epidemic proportions in several Asian countries. However, the chlorination of water, pasteurization of milk, the sanitary disposal of sewage, and the hygienic handling of foodstuffs have reduced the hazard of cholera in Canada to the point where special preventive measures are no longer required except to immunize persons entering infected areas. Cholera vaccine is widely available in Canada and may be obtained from most physicians or Municipal Health Departments.

Yellow Fever

Canada is not a receptive area for yellow fever and climatic conditions are not suitable for the propagation of the specific species of the mosquito responsible for the spread of the disease, except for part of the year from April 1st to September 30th in those parts of Ontario and Nova Scotia lying south of the 45° parallel of latitude. Canada also co-operates with other countries in the application of national control measures on conveyances and persons from endemic areas, and in the vaccination of persons who are proceeding to receptive areas in other countries. Yellow fever inoculations are available at 15 strategically located centres across Canada. An additional centre is maintained in Europe at No. 1 Air Division. All these centres have facilities for storage and administration of the vaccine in accordance with World Health Organization regulations. Valid international certificates of vaccination against yellow fever are recognized by member nations of the World Health Organization and are only obtainable at these centres. During the year, 5,316 inoculations were performed.

Table 20, "Control of Rats on Vessels", surveys work done in respect to rat inspection on ships.

Leprosy

Leprosy was first discovered in Canada in 1815 and was probably introduced by an early settler from whom a large but localized focus of infection developed in the northeastern part of New Brunswick, totalling almost 300 cases. Medical facilities were first provided by the Province of New Brunswick in 1844 at Shell-drake Island in the Miramichi River, and in 1849 were transferred to Tracadie where special buildings had been erected. In 1869, the facilities were improved and in 1880, they were acquired by the Federal Government which assumed responsibility for the treatment of leprosy at the request of the Province of New Brunswick. After a fire destroyed the hospital in 1943, a contract was signed by the

TABLE 20
(Quarantine Service)
CONTROL OF RATS ON VESSELS
1959-60

Port	Vessels Inspected, and Fumigated and Deratting Certificates Issued	Vessels Inspected and Exemption Certificates Issued	Vessels Inspected and Remanded or Time Extended	Vessels Inspected and Certificates Endorsed or Related Action	Total Vessels Inspected	Rodents Recovered	
						Rats	Mice
Halifax, N.S.	3	42	89		134		
Sydney, N.S.		13			13		
Saint John, N.B.	1	33	6		40		
Baie Comeau, P.Q.		2			2		
Montreal, P.Q.	1	120	3	4	128		
Port Alfred, P.Q.		32			32		
Quebec City, P.Q.	1	16			17	19	
Sept Isles, P.Q.		9			9		
Three Rivers, P.Q.		3			3		
Vancouver, B.C.	9	117	15	448	589	271	
Victoria, B.C.		26	2	163	191		
Totals	15	413	115	615	1,158	290	

Federal Government and the religious hospitallers of the Hotel-Dieu of St. Joseph of Tracadie, as a result of which the Federal Government contributed toward the cost of erecting a new and modern fireproof wing attached to the General Hospital of the Order. Hospital care was assumed by the sisterhood on a per diem basis under the medical care and direction of a departmental medical officer especially trained in the diagnosis and treatment of leprosy.

The accommodation consisted of duplicate suites, each containing six private rooms and recreational facilities.

A leprosarium existed from 1892 on the west coast of Canada on D'Arcy Island and was subsequently transferred to Bentinck Island in 1924. These facilities became obsolete and were closed in 1959. At the end of the fiscal year, five patients were receiving active treatment at Tracadie and 16 were under the care of family physicians who administered treatment under the surveillance of local medical officers of health. During the year, two persons arrived in Canada suffering from leprosy and arrangements were made to return them to their own countries after confirmation of the diagnosis.

Statistics for the fiscal year 1959-60 are shown in Table 21, "Leprosy in Canada".

TABLE 21

LEPROSY IN CANADA
1959-60

Inpatients

Inpatients as of April 1, 1959	8
Admitted during the year	0
Died during the year	0
Discharged during the year	3
Remaining in hospital as of March 31, 1960	5

Outpatients

Continuing treatment at home under medical supervision	16
Total known cases in Canada	21
New cases reported during year	2*

* Imported cases returned to country of origin.
Not included in outpatients or inpatients.
Not under treatment.

Immigration Medical Service

The Immigration Medical Service is responsible for the preliminary medical examination of immigrants abroad and the final medical examination and medical care of persons arriving in Canada subject to immigration authority. The service is divided into several operational sections which include: a Headquarters Section responsible for over-all operations and liaison between various levels of government in medical matters pertaining to immigrants; an European Section staffed by medical officers rotated from Canada with offices throughout the British Isles and Continental Europe; a Preliminary Screening Section which reviews in detail medical information and X-Rays on each immigrant, examinations taking place in practically every country of the world except those in the area coming under

the European Section; a Canadian Section functioning at Canadian ports of entry which is responsible for the final examination, investigation, and treatment of persons arriving in Canada subject to immigration authority.

The European Section offices are located in various European capitals and other large population centres and carries out its activities in close association with offices of the Immigration Branch of the Department of Citizenship and Immigration. Its head office is in London, England, and other offices are at Liverpool, Glasgow, Bristol, Leeds, Belfast, and Dublin in the British Isles, and at Athens, Berlin, Berne, Brussels, Copenhagen, Cologne, Hamburg, Helsinki, Munich, Paris, Rome, Stuttgart, The Hague, and Vienna, on the Continent.

The total medical officer establishment overseas was 60, of which eight positions were vacant at the end of the year. The balance of the overseas staff consisted of one Canadian administrative officer and 90 locally engaged persons working as clerks, stenographers, nurses and radiographers.

Medical officers in charge of some European offices, in addition to their regular duties, serve as medical attachés to Canadian Embassies.

All medical examinations conducted by Canadian medical officers are free of charge and chest X-rays are free at the centres listed in the British Isles and also in Paris and The Hague. With the exception of Dublin, the Department operates its own X-ray facilities at all centres where X-rays are provided free. At all other centres the migrant is required to pay an approved radiologist for his chest X-ray.

During the year, travelling teams of Canadian medical officers carried out examinations in the Azores, Trieste, Spain, Malta, Bordeaux, Metz, Avignon, Cairo, and Latina.

Specially appointed physicians, called roster doctors, examined immigrants at many other centres where the volume of examinations is small. They charge a fee for each examination and their work is supervised by the Canadian office for the area. Roster doctors are located at various centers in the British Isles, Malta, Switzerland, Portugal, Norway, Sweden, Finland, and France.

During the year, a Canadian medical officer was posted temporarily to New Delhi to train and appoint roster doctors at New Delhi, Bombay, Calcutta, and Karachi. This officer also visited the roster doctor at Hong Kong.

The Preliminary Screening Section is responsible for the preliminary medical screening of immigrants in countries other than those within the scope of the operations of the European Section. In all such countries, the Service is represented by an officer of the Department of Citizenship and Immigration, an officer of the Canadian Embassy, or where there is no Canadian representative, arrangements for medical examination are made by an officer of the British Embassy or British Consular Service.

The medical reports and chest X-rays are forwarded for review to the Preliminary Screening Section, which then decides whether the immigrant is likely to be rejected or able to pass medical examination on arrival at a Canadian port.

During the year, the number of cases reviewed by this Section set a new record of 32,576, which may be compared to 13,000 in 1955. Over the past five years, the average annual increase in the work of this Section has been

approximately 30 per cent. Medico-legal assistance was also made available to immigration authorities in connection with problems encountered in the identification of certain applicants for entry. This work consisted chiefly of special examinations of the bones for the purpose of estimating age and special blood tests on parents and children in cases of disputed parentage.

The activities of the Preliminary Screening Section are shown in Table 25.

The Canadian Section of the Immigration Medical Service is responsible for the final medical examination and treatment, if necessary, of persons arriving subject to immigration authority at Canadian ports of entry. Medical staffs are stationed at the ports of St. John's, Nfld.; Sydney and Halifax, N.S.; Saint John, N.B.; Port Alfred, Rimouski, Montreal, and Quebec, P.Q.; Vancouver and Victoria, B.C.; and air terminals in Gander, Nfld.; Sydney and Halifax, N.S.; Dorval, P.Q.; Ottawa and Toronto, Ont.; Winnipeg, Man.; and Vancouver and Victoria, B.C. A fee for service arrangement with designated physicians is in effect at the following airports: Stephenville, Nfld.; Moncton, N.B.; London and Windsor, Ont.; and Edmonton and Calgary, Alta. Immigration hospitals for the medical investigation and treatment of immigrants are located in Immigration Buildings at Halifax, N.S.; Saint John, N.B.; and Quebec, P.Q.

Following Canada's announcement in September 1959, that it would accept 100 hard-core tuberculous refugees, a medical officer of the Overseas Service was appointed to direct the selection and assessment of these people. He was assisted by other medical officers stationed in Rome, Vienna, Munich, and Hamburg. A medical officer and two nurses accompanied each flight of tuberculous immigrants and their families to Canada.

During the year, new office premises were occupied in Berlin and a new X-ray plant was installed in the Paris office to replace an old unit which was becoming obsolete.

Total new examinations in the United Kingdom during the year were 27,385, an increase of 3,168 from the 1958-59 total. Re-examinations numbered 3,870, a decrease of 1,916 from the previous year. On the Continent of Europe, initial examinations totalled 71,044, a decrease of 6,954 from 1958-59, while the total re-examinations were 14,844, a decrease of 1,706 from last year. The over-all total of new examinations in Europe was 98,429, a decrease of 3,784 from 1958-59, while total re-examinations were 18,714 compared with 22,336, the 1958-59 total, a decrease of 3,622.

Table 22 lists details of medical examinations carried out overseas.

Table 23 records the locations and the number of immigration medical examinations and inspections carried out in Canada.

Table 26 lists the number of persons rejected under various medical sections of the Immigration Act by country of examination; certifications under the Preliminary Screening Section are not included.

TABLE 22

(Immigration Medical Service)

SUMMARY OF ACTIVITIES

Fiscal Year 1959-60

CANADA:

Immigrants medically examined and/or inspected	106,572
Non-immigrants medically examined and/or inspected	50,330
Certifications as "prohibited" under Sec. 5 (a) (b) and (s) of the Immigration Act	320
Certifications as physically defective under Sec. 5 (c)	4,909

OVERSEAS:

Prospective emigrants medically examined and re-examined	121,329
<i>British Isles.</i>	
Prospective emigrants medically examined	27,385
Prospective emigrants medically re-examined	3,870
<i>Continent of Europe.</i>	
Prospective emigrants medically examined	71,044
Prospective emigrants medically re-examined	14,844
<i>Orient.</i>	
Prospective emigrants medically examined	3,428
Prospective emigrants medically re-examined	758
Certifications as "prohibited" under Sec. 5, (a) (b) (i) (j) and (s) of the Immigration Act	3,721
Certifications as physically defective under Sec. 5(c)	14,103

ALL OTHER COUNTRIES:

Medically pre-screened at Ottawa	32,576
Certifications as "prohibited" under Sec. 5(a) and (b)	506
Certifications as physically defective under Sec. 5(c)	5,135

TABLE 23

IMMIGRATION MEDICAL EXAMINATIONS AND INSPECTIONS IN CANADA
1959-60

Location	Immigrants	Non-Immigrants
Gander, Nfld.....	571	934
St. John's, Nfld.....	312	322
Halifax, N.S.....	24,615	883
Sydney, N.S.....	30	7
Saint John, N.B.....	435	110
Montreal, P.Q.....	2,020	613
Quebec, P.Q.....	29,919	15,605
Dorval, P.Q.....	26,267	19,618
Malton, Ont.....	3,358	3,940
Toronto, Ont.....	1,684	7
Fort Erie and out-ports, Ont.....	1,524	1,152
Niagara Falls and out-ports, Ont.....	861	513
Winnipeg Airport, Man.....	146	112
Vancouver, B.C.....	1,726	885
Vancouver Airport, B.C.....	2,672	3,496
Victoria, B.C.....	215	167
Others.....	10,217	1,966
Totals.....	106,572	50,330

TABLE 24
DETAILS OF MEDICAL EXAMINATIONS—OVERSEAS
Fiscal Year 1959-60

	Examinations	Re-examinations
By Canadian Medical Officers in British Isles.....	25,137	3,471
By Roster Doctors in British Isles.....	2,248	399
By Canadian Medical Officers on the Continent.....	67,718	13,950
By Roster Doctors on the Continent.....	3,326	894
By Roster Doctors in the Orient.....	3,428	758
Total—1959-60.....	101,857	19,472
Total—1958-59.....	106,587	23,121
British Isles:		
<i>By Canadian Medical Officers</i>		
Belfast.....	1,331	322
Bristol.....	1,212	139
Glasgow.....	5,963	863
Leeds.....	2,661	382
Liverpool.....	2,911	518
London.....	11,059	1,247
<i>By Roster Doctors</i>		
Belfast Area.....	19	20
Bristol Area.....	130	12
Dublin Area.....	823	169
Eire Area.....	118	14
Glasgow Area.....	429	72
Leeds Area.....	232	30
Liverpool Area.....	110	10
London Area.....	387	72
Continent:		
Athens.....	5,454	908
Berlin.....	1,618	456
Berne.....	1,430	143
Brussels.....	2,010	271
Cairo.....	38	
Cologne (including Hard Core Refugees).....	6,556	1,607
Copenhagen.....	1,715	232
The Hague.....	7,447	1,060
Hamburg (including Hard Core Refugees).....	2,795	679
Helsinki.....	791	141
Malta.....	714	27
Munich (including Hard Core Refugees).....	2,103	469
Paris.....	4,706	707
Portugal and Azores.....	537	
Italy (including Hard Core Refugees).....	233	16
Rome (including Latina Scheme).....	23,321	5,890
Trieste Scheme.....	551	14
Stuttgart.....	2,701	823
Austria (including Hard Core Refugees).....	180	68
Vienna.....	2,818	439
<i>By Roster Doctors</i>		
Finland.....	315	94
France.....	3	2
Malta.....	230	104
Norway.....	463	88
Portugal.....	1,824	547
Sweden.....	491	59
Orient:		
<i>By Roster Doctors</i>		
Hong Kong.....	2,242	642
India.....	1,069	92
Pakistan.....	117	24
Total.....	101,857	19,472

TABLE 25
 CASES PRE-SCREENED AT OTTAWA SHOWING COUNTRY OF ORIGIN
 Fiscal Year 1959-60

Country	Total Cases	Examined	Re-Examined	Passed	Certifications Under Section 5			Total Certifications
					"A"	"B"	"C"	
Afghanistan.....	1	1					1	1
Algeria.....	33	31	2	29		1	6	7
Argentina.....	618	524	94	528		12	97	109
Australia.....	1,414	1,284	130	1,260	2	1	151	154
Azores.....	4,262	3,982	280	3,959	3	34	247	284
Bahrein Island.....	4	4		4				
Bermuda.....	26	24	2	23			1	1
Bolivia.....	7	5	2	5			2	2
Brazil.....	356	294	62	290		11	71	82
British Guiana.....	211	194	17	179		1	30	31
Federation of West Indies.....	1,658	1,542	116	1,496	1	3	117	121
Bulgaria.....	6	6		3			6	6
Burma.....	19	12	7	17			1	1
Canada.....	5,966	5,375	591	4,999	22	65	1,030	1,117
Central Africa.....	105	103	2	90		2	8	10
Central America.....	16	16		14			2	2
Ceylon.....	45	45		45	1	2	3	6
Chile.....	59	57	2	49		1	4	5
China.....	24	20	4	9		5	6	11
Colombia.....	20	20		21			3	3
Cyprus.....	10	8	2	7			3	3
Czechoslovakia.....	72	44	28	50		2	17	19
Dutch West Indies.....	48	38	10	42			4	4
East Indies.....	1	1		1				
Ecuador.....	9	9		9				
Egypt.....	49	41	8	42			8	8
Fiji Islands.....	3	3		2			1	1
Gibraltar.....	5	5		4			1	1
Hungary.....	908	482	426	519		28	417	445
Iceland.....	46	38	8	38		1	6	7
Indo China.....	63	39	24	48		12	3	15
Indonesia.....	70	70		50			2	2
Iran.....	18	14	4	13			4	4
Iraq.....	4	4		4				
Israel.....	2,199	2,106	93	1,818	1	33	411	445
Japan.....	330	313	17	284		13	43	56
Jordan.....	3	3		2			1	1
Korea.....	9	8	1	8				
Lebanon.....	437	369	68	368		10	59	69
Libya.....	2	2		2				
Madeira.....	176	158	18	158		4	11	15
Malaya.....	97	83	14	82		4	13	17
Mauritius.....	1	1		1				
Mexico.....	77	74	3	69		1	8	9
Morocco.....	275	239	36	234		3	37	40
New Caledonia.....	4	4		1			1	1
New Guinea.....	1	1		1				
New Zealand.....	459	433	26	401	1	3	59	63
Pakistan.....	23	21	2	26		1	1	2
Paraguay.....	343	285	58	276	3	11	50	64
Peru.....	27	23	4	26			3	3
Philippines.....	113	98	15	93		3	17	20
Poland.....	3,332	3,024	308	2,370	1	109	914	1,024
Roumania.....	393	189	204	241		7	181	188
Russia.....	123	48	75	41		9	79	88
Society Islands.....	1	1		1				
South Africa.....	519	469	50	472			42	42
Spain.....	405	357	48	338		18	50	68
St. Pierre and Miquelon.....	5	1	4	1				
Thailand.....	13	13		12			1	1
Tunisia.....	51	47	4	45		1	7	8
Turkey.....	319	279	40	260		6	56	62
Uruguay.....	81	72	9	64		1	15	16
United States of America.....	5,063	4,898	165	4,406	14	17	684	715
Venezuela.....	492	464	28	446		4	48	52
West Indies Group.....	107	98	9	96		1	8	9
Yugoslavia.....	940	876	64	798		18	83	101
Totals.....	32,576	29,392	3,184	27,290	49	458	5,134	5,641

TABLE 26
(Immigration Medical Service)
CERTIFICATIONS UNDER SECTION 5 OF THE IMMIGRATION ACT
Fiscal Year 1959-60

Certifications under	Canada		British Isles		Continent of Europe		Orient		Canada		Total
	I.M.S. Offices		Examined by Can. M.O.'s	Examined by Roster Drs.	Examined by Can. M.O.'s	Examined by Roster Drs.	Examined by Roster Drs.		Pre-screened at Ottawa		
SS (a) Mental Diseases and Defects.....	32		80	16	229	8	3		48		416
SS (b) Chronic Infectious Diseases.....	287		232	34	1,978	54	1,084		458		4,127
SS (c) Physical Defects.....	4,909		4,339	521	8,087	398	758		5,135		24,147
SS (i) Chronic Alcoholism.....					1						1
SS (j) Drug Addiction.....				1							1
SS (s) Cases Medically Impaired.....	1				1						2
Total.....	5,229		4,651	572	10,296	460	1,845		5,641		28,694

Sick Mariners Service

An Act providing for the free medical treatment of foreign sailors in Canadian seaports was passed at the first session of Canada's First Parliament. The Province of New Brunswick, prior to Confederation, levied a duty of a penny a ton on all foreign ships and the money collected was used to treat sick sailors left behind when their ships sailed. This service was taken over by the Federal Government by agreement at the time of Confederation when it was extended to cover, in addition to New Brunswick, the Provinces of Nova Scotia, Prince Edward Island, Quebec, British Columbia, and those parts of Ontario and Manitoba bordering on Hudson and James Bays. When Newfoundland joined Confederation, it was added to the area of the Act's operations.

Under the authority of Part V of the Canada Shipping Act a duty of two cents per ton, or not less than \$2, is levied on each vessel arriving from a port in another province or from a foreign country. In the case of fishing vessels the payment is optional but the first payment may only be paid prior to the first fishing voyage in the calendar year. Free treatment to the extent necessary up to one year is made available to all crew members who become ill or who are in need of treatment while employed on a vessel in respect of which sick mariners dues have been paid.

On January 1st, 1959, hospital insurance agreements became effective between the Federal Government and the Provinces of British Columbia, Nova Scotia and Newfoundland, and the agreements were extended to New Brunswick effective July 1st, 1959, and Prince Edward Island effective October 1st, 1959. Under these agreements, sick mariners who are local residents, are entitled to hospital care under provincial hospital insurance legislation and, in consequence of this, it is no longer necessary to provide hospitalization to such persons under Part V of the Canada Shipping Act. It is necessary, however, to continue to provide medical care and drugs to such local residents, and the full benefits including hospitalization to foreign seamen and those from provinces without hospital insurance entitlement. Thus seamen continue to receive the same total treatment benefits as in the past. The provision of supplying medical care and drugs only without hospital benefits to insured seamen did not affect the popularity of the Service. This is revealed by the number of fishing vessels paying sick mariners dues on a voluntary basis. It did not fall but rather rose 6 per cent to 6,535, compared to 6,173 the previous year. There was a slight decrease in the number of vessels paying sick mariners dues on a compulsory basis offset by the increase in fishing vessels, so that the total number of vessels paying sick mariners dues rose 3 per cent to 9,143 vessels, compared to 8,870 the previous year.

The revenue collected from these vessels rose 13 per cent, to \$403,430.06 from \$357,132.09, the previous year. As a direct result of the altered hospital arrangements mentioned above, expenditures fell 17 per cent, to \$846,355.19, from \$1,020,212.60 the previous year.

Sick mariners' clinics, staffed by medical officers of the Department, were in operation at Halifax and Sydney, N.S.; Saint John, N.B.; Quebec and Montreal, P.Q.; and Vancouver, B.C. At Sydney, Indians of the various reserves of the Eskasoni Indian Agency were also treated by the staff of the Sick Mariners Service.

TABLE 27

(Sick Mariners Service)

STATEMENT OF DISEASES AND INJURIES TREATED
During the Fiscal Year 1959-60

	<i>Cases Treated</i>
Tuberculosis of respiratory system	24
Tuberculosis other forms	6
Syphilis and its sequelae	182
Gonococcal infection	2,252
Dysentery all forms	5
Other infective diseases commonly arising in intestinal tract	257
Certain diseases common among children:	
Chicken pox	7
Measles	26
Mumps	39
Malaria	1
Diseases due to helminths	6
All other diseases classified as infective and parasitic	367
Benign neoplasms	438
Malignant neoplasms and others	88
Allergic disorders	1,260
Thyroid gland	329
Diabetes mellitus	104
Avitaminosis	99
Anaemias	2,448
Psychoneuroses and psychoses	1,589
Vascular lesions	85
Diseases of eyes	818
Diseases of ear and mastoid process	1,008
Rheumatic fever	64
Chronic rheumatic heart disease	99
Arteriosclerotic and degenerative heart	724
Hypertensive disease	884
Diseases of veins	3,208
Acute naso-pharyngitis (Common cold)	4,154
Acute pharyngitis and tonsillitis and hypertrophy of tonsils and adenoids	1,873
Influenza	5,337
Pneumonia	554
Bronchitis	1,946
Silicosis and pulmonary fibrositis	1
All other respiratory disease	2,915
Diseases of stomach and duodenum	2,604
Appendicitis	253
Hernia of abdominal cavity	835
Diarrhoea and enteritis	519
Diseases of gall bladder and bile ducts	437
Other diseases of digestive system	4,308
Nephritis and nephrosis	397
Diseases of genital organs (female)	5
Diseases of genital organs (male)	511
Complications of pregnancy	2
Boils, abscesses, cellulitis and other skin infections	1,749
Other diseases of the skin	1,119
Arthritis and rheumatism	774
Diseases of bones and other organs of movement	447
Congenital malformations	3
Other specified and ill-defined diseases	831
Occupational accidents and occupational poisonings	951
Accidents and poisonings, not specified as occupational	2,972
	<hr/>
	51,914

Port physicians on a part-time salary basis provided treatment at St. John's, Nfld.; Digby, Liverpool, Lunenburg, North Sydney, and Pictou, N.S.; Shippegan and Tracadie, N.B.; Gaspé and Port Alfred, P.Q.; and at Port Alberni and Powell River, B.C.

The cost of treatment, including drugs, by salaried full and part-time physicians, averaged approximately \$2.90 per visit. At various other ports treatment was provided by designated port physicians on a fee-for-service basis.

The total number of hospitals treating sick mariners during the year was 155 and the number of port physicians, consultants, and specialists providing treatment was 846. A total of 43,940 seamen received treatment compared to a total of 31,943 the previous year; 2,662 were admitted to hospitals compared to 2,462 the previous year. The total number of crew members on vessels paying sick mariners dues was 124,613.

Pulmonary tuberculosis cases discovered and treated amounted to 25 for an unadjusted rate of 19 per 100,000 persons. There were six cases of other forms of tuberculosis for an unadjusted rate of five per 100,000 persons.

Administration of Order-in-Council P.C. 1955-4/483

Under the terms of the above Order-in-Council free treatment was provided for the crew members of government ships under the same conditions as crew members of ships which paid sick mariners dues under the provisions of Part V of the Canada Shipping Act. There were 2,054 eligible crew members on 201 government vessels. The total cost of treatment was \$86,221.07. This represented an increase over the previous year when the total cost amounted to \$73,564.45.

TABLE 28
(Sick Mariners Service)
REVENUE, EXPENDITURE AND DEFICIT CLASSIFIED ACCORDING
TO TYPE OF VESSEL
Calendar Year 1959

Classification of Vessel	Revenue	Expenditure	Deficit	Deficit Expressed as Percentage of Revenue
	\$	\$	\$	
Foreign-going.....	385,750.80	448,427.91	62,677.11	16
Coasting.....	3,859.40	13,999.64	10,140.24	262
Fishing.....	13,819.86	376,215.02	362,395.16	2,622
Additional expenditure not classified as to type of vessel.....		7,712.62	7,712.62	
Total.....	403,430.06	846,355.19	442,925.13	109

NARCOTIC CONTROL DIVISION

The functions and activities of the Division are formulated with a view to maintaining the required control over narcotics but at the same time endeavouring not to interfere in any way with the orderly distribution of supplies for medical purposes. Ensuring that adequate material in acceptable forms of medication is always available for the medical needs of the country is an essential objective. Equally important, however, is the prevention of the development of addiction by control and educational methods.

Licensed Dealers

A total of 156 pharmaceutical firms were licensed during the calendar year to deal in narcotics. Of these, 92 were authorized to manufacture pharmaceuticals classified as narcotics while 64 acted as distributors only.

In accordance with internal and international responsibility, all these business establishments were subject to careful scrutiny in regard to both their pharmaceutical and business standards as well as the care and security kept over narcotic stocks maintained by them.

During the year, 146 licences to import were issued which covered all narcotic requirements. Export licences of the total of 63 were issued. These licences permitted the shipment of Canadian manufactured pharmaceutical preparations with a narcotic content to countries which previously has signified their medical needs for the medication.

Supervision Maintained Over Retail Pharmacies

Approximately 14,000 sales reports were requested and received from pharmacists throughout Canada during the year. The information contained in these reports was scrutinized closely to detect and prevent cases of incipient addiction. The reports set forth the quantities of narcotic medication dispensed as a result of prescriptions issued by physicians.

Transactions involving the new synthetics, which have been classified internationally as narcotics, were checked closely to ensure addiction was not occurring through lack of knowledge of the addiction properties of these drugs.

Correspondence was conducted with many physicians concerning persons being supplied with narcotics both legally for medical purposes and injudiciously for addiction purposes, with very satisfactory results. In addition, considerable correspondence was exchanged with pharmacists drawing their attention to irregularities which came to light as a result of the activities of the Division.

Inspectional Work

There are attached to the staff of the Division, seven narcotic auditors. These completed some 3,900 audits, inspections, and investigations during the year of licensed dealers, retail pharmacies, and hospitals. It has been demonstrated that this type of work is indeed a valuable asset to narcotic control.

Consumption Statistics

A slight increase in consumption of narcotics continued. This is partially due to increased population and in addition, to the extension of medical services provided through pre-paid medical coverage. A definite trend of interest in the field of synthetic narcotics continues. Activities by pharmaceutical firms in the evaluation of new synthetic analgesic drugs have increased and undoubtedly, this work will eventually result in several additional new types of narcotics being introduced to the Canadian market. Details of imports and consumption figures are set forth in the charts on pages 113 and 114.

Addiction

From records available, our addiction population totalled in the neighbourhood of 3,400. This figure is closely related to addiction figures for the past six years, despite our increase in population.

1954.....	3,212	1957.....	3,315
1955.....	3,425	1958.....	3,412
1956.....	3,241	1959.....	3,408

Convictions

The majority of our addict population continues to obtain supplies as a result of heroin being smuggled into Canada. During the year, there was no evidence of any noticeable quantities of material being diverted from legal supplies to the illicit traffic.

There were 597 convictions under the Opium and Narcotic Drug Act, involving 556 individuals. Of these, 388 were males and 168 females. Nine males and 14 females were under the age of 20. The important age group was between 20 and 35 which accounted for approximately 60 per cent of the convictions. Only two convictions under the Act were registered against professional persons entrusted with narcotics.

Liaison With Medical, Pharmaceutical and Nursing Professions

The Division continued to maintain close contact with the provincial registrars of the medical, pharmaceutical, and nursing professions. Valuable assistance was provided by the various registrars in furnishing up-to-date information concerning the identity and location of registered members.

Lectures were given to graduating classes in medical schools, pharmaceutical, and nursing faculties at the various universities in Canada. This field of work is increasingly important in the light of the changing narcotic picture due to the appearance of many new drugs on the market with marked and potential addiction properties. Personal interviews conducted with addicted professional personnel also have proved very useful as well as beneficial.

The Division was host to several visiting groups consisting of members of the healing professions. Visits of this type create interest and understanding in the matter of narcotic control. They serve to foster liaison and co-operation on the part of those who play an important role in preventing the development of addiction.

International Co-operation

All required reports were submitted to interested sections of the United Nations and liaison with narcotic authorities in other countries remained at a high standard.

TABLE 29
SHOWING IMPORTS OF MAIN NARCOTICS FOR PERIOD 1950-1959 INCLUSIVE
Unit of Weight Kilogramme—(Pure)

Year	Raw Opium	Medic- inal Opium and Preps.	Papa- verine	Mor- phine	Hydro- codone	Hydro- mor- phone	Ethyl- morphine	Codeine	Phol- codeine	Cocaine	Alpha- prodine	Levor- phanol	Metha- done	Pethi- dine
1950.....	45.615	113.400	36.628	66.254	4.649	0.595	34.218	2,644.176	.....	38.102	.....	.....	2.608	155.358
1951.....	54.658	125.392	47.401	87.104	8.675	0.482	31.128	1,056.718	.....	29.852	.....	.....	2.069	260.508
1952.....	1.502	147.420	43.035	33.254	6.407	0.425	39.775	1,647.078	.....	31.808	.....	.....	9.327	349.924
1953.....	49.442	106.823	43.659	78.246	5.018	0.368	31.411	1,153.335	0.595	49.612	2.636	0.793	5.897	323.449*
1954.....	5.897	149.688	84.936	60.499	17.775	0.198	39.378	2,814.390	17.775	48.308	1.587	0.567	9.185	592.061
1955.....	31.525	149.688	86.836	52.192	5.301	0.425	24.182	2,396.624	5.698	29.597	6.548	0.567	9.554	430.665
1956.....	17.236	145.350	87.448	47.332	13.012	0.471	55.291	1,893.242	2.602	32.865	2.464	0.338	3.911	323.104
1957.....	2.000	90.902	93.770	30.857	20.013	0.355	19.941	2,039.416	3.872	31.536	5.548	0.353	6.489	534.702
1958.....	0.567	108.864	83.109	28.342	33.338	0.174	19.978	2,445.569	.....	33.474	4.488	0.414	6.788	407.728
1959.....	.....	111.630	94.223	35.094	15.282	0.267	21.036	2,813.256	3.580	19.482	5.984	0.370	4.063	546.189**

*Pure Drug figure utilized since 1953.
**53.940 Kg. returned to Gr. Br. discoloured material.

TABLE 30
SHOWING ESTIMATED CONSUMPTION OF THE MAIN NARCOTICS FOR THE PERIOD 1950-1959 INCLUSIVE
Unit of Weight—Kilogramme (Pure)

Year	Raw Opium	Medic- inal Opium and Preps.	Papa- verine	Mor- phine	Heroin	Hydro- mor- phone	Codeine	Ethyl- morphine	Phol- codeine	Cocaine	Alpha- prodine	Levor- phanol	Metha- done	Pethi- dine
1950.....	66.055	152.380	46.267	74.079	28.350	0.454	1,292.250	31.270	.....	39.888	.....	.....	11.255	206.104
1951.....	57.267	161.397	38.613	71.584	26.309	0.425	1,598.486	44.254	.....	36.004	.....	.....	12.871	252.769
1952.....	57.975	167.974	57.984	71.980	22.000	0.567	1,795.831	21.971	.....	37.989	.....	0.822	11.000	285.966
1953.....	21.603	142.771	47.940	76.318	23.474	0.595	1,508.192	44.850	0.227	40.030	0.822	0.964	8.845	298.015*
1954.....	51.568	158.023	73.937	70.024	28.123	0.085	1,819.701	16.812	5.670	33.198	3.147	0.368	10.858	335.324
1955.....	20.950	112.294	71.754	49.329	12.616**	0.425	2,286.994	31.780	4.649	35.693	4.111	0.624	5.953	372.434
1956.....	28.306	185.820	97.995	50.402	6.158	0.390	1,885.903	28.835	6.358	34.507	3.262	0.478	7.530	478.143
1957.....	21.500	112.519	90.158	43.348	5.605	0.319	2,407.116	30.284	4.270	31.921	5.945	0.413	5.583	333.078
1958.....	3.648	140.819	73.469	44.645	2.971	0.245	2,501.709	27.966	1.788	30.188	3.634	0.355	6.768	406.990
1959.....	0.539	157.120	85.635	36.373	0.473	0.270	2,571.228	25.825	3.435	31.171	4.977	0.335	5.290	547.115

* Pure Drug figure utilized since 1953.
** Imports of Heroin banned as of January 1, 1955.

TABLE 31
CONVICTIONS UNDER THE OPIUM AND NARCOTIC DRUG ACT DURING THE CALENDAR YEAR 1959

Province	NATURE OF OFFENCE						DRUGS INVOLVED							
	Sect. 10	Sect. 13(1)	Illegal Possession	Traffic- ing	Possession for the Purpose of Trafficking	Total	Heroin	Mor- phine	Mari- huana	Metha- done	Pethi- dine	Codeine	Anil- eridine	Total
Newfoundland.....														
Prince Edward Island.....														
Nova Scotia.....			1	1		2		1				1		2
New Brunswick.....														
Quebec.....			13		7	20	16		4					20
Ontario.....	2		152	26	12	192	175	3	10		3		1	192
Manitoba.....			8	1		9	8	1						9
Saskatchewan.....														
Alberta.....			19	2	2	23	18	2		1	2			23
British Columbia.....		1	322	11	17	351	347	2		2				351
Total.....	2	1	515	41	38	597	564	9	14	3	5	1	1	597

(Of the above there were 6 males and 7 females in Ontario, one male and one female in Alberta, 19 males and 3 females in British Columbia who had 2 convictions, as well as one female in Ontario and one female in British Columbia who had 3 convictions.)

WELFARE BRANCH

INTRODUCTION

Among noteworthy developments affecting the activities of the Branch during the year were the transfer to other departments of a number of responsibilities for Civil Defence; the signing of agreements under the Unemployment Assistance Act with the one provincial and one territorial government not previously participating under its terms; the convening of the Advisory Boards under the Old Age Assistance, Blind Persons Allowances, and Disabled Persons Allowances Acts; the negotiation of arrangements on social security affecting persons who move between Canada and the United Kingdom; and the proposal to amend the Old Age Security Act to extend the payment of pensions to certain pensioners residing outside of Canada.

Civil Defence

Following an exhaustive review of Civil Defence and emergency planning functions undertaken in 1958 and 1959, a plan was developed for the reallocation of most Civil Defence functions to other departments or agencies, largely on the basis of the relation of the functions involved to the normal work of these other departments or agencies. The transfer of responsibilities took effect on September 1, 1959. Since that date the Emergency Measures Organization (Privy Council Office), the Department of National Defence and the Royal Canadian Mounted Police have assumed the major responsibilities in the Civil Defence field for which this Department was previously responsible. The Department of National Health and Welfare continues to be responsible for the development of all emergency health and welfare services, as well as the administration and management of the Federal Civil Defence College at Arnprior. Emphasis during most of the year was placed on the co-ordination of the Department's Civil Defence activities with the Civil Defence and emergency planning functions of other departments and agencies.

Unemployment Assistance Agreements

With the signing of agreements under the Unemployment Assistance Act with the Province of Quebec on July 1 and with the Yukon Territory on November 1, all the provinces and both the territories are now participants in the program, making it nation-wide in scope. Changes in the general assistance legislation of a number of provinces have had the effect of extending the coverage of the Unemployment Assistance program.

Old Age Assistance, Blindness and Disability Allowances

The Advisory Boards provided for under the Old Age Assistance, Blind Persons and Disabled Persons Allowances Acts met toward the end of September

1959, to consider certain changes in the regulations under the legislation. All provinces were represented at the meetings of the Boards; seven by the provincial ministers responsible for welfare matters. Agreement was reached on a number of recommendations made by the Boards and were in draft form for approval by the Governor-in-Council at the end of the year.

Arrangements on Social Security With the United Kingdom

As a result of discussions between officials of Canada and the United Kingdom, arrangements were entered into as of January 1, 1960, relating to the provision of social security benefits under Canadian and United Kingdom laws to persons making application for benefit in one country, who have resided for a period of time in the other. The arrangements were set out in an exchange of correspondence between the United Kingdom High Commissioner to Canada and the Minister of National Health and Welfare. The arrangements do not involve the assumption of any new responsibilities or any changes in legislation by Canada. The United Kingdom authorities, after making a detailed study of the residence and other conditions of eligibility contained in Canadian legislation affecting family allowances, old age security, old age assistance, blindness and disabled allowances, unemployment insurance, and hospital insurance, concluded that they would be justified in relaxing certain of the requirements of their legislation in favour of persons going to or returning to the United Kingdom with earlier periods of residence in Canada. The Canadian Government has agreed that it will keep the United Kingdom Government advised of any changes which may be made by Parliament, from time to time, affecting the position under Canada's Social Welfare laws of persons from other countries who come to settle in Canada.

Requests for information needed to establish the claim for unemployment benefits and retirement benefits of persons in the United Kingdom who had formerly been resident in Canada began to be received by the Department early in 1960. Methods of obtaining the required information for the United Kingdom authorities were developed with the co-operation of the Unemployment Insurance Commission, the War Service Records Division of the Department of Veterans Affairs, and through the use of the regional offices of the Family Allowances and Old Age Security Division.

Old Age Security

The Speech from the Throne in January 1960, referred to the Government's intention of introducing an amendment to the Old Age Security Act to establish a basis for the payment of pensions to Canadians residing outside Canada. This legislation had not been introduced by the end of the fiscal year but by that time, extensive arrangements had been made for the administration of the proposed amendment.

Sales Tax Refunds for Welfare Institutions

The Excise Tax Act provides for refunds of sales tax to public institutions devoted to the care of children, or aged, infirm or incapacitated persons if the

institutions are certified by the Minister of National Health and Welfare as meeting the requirements of the Act. The Act was amended in 1958 to remove the requirement that the care offered be on a permanent or semi-permanent basis and to provide that refunds can be made on goods purchased up to two years prior to the date of certification of the institution.

During the year, 31 applications for certification were received of which 23 were approved and eight rejected; two institutions were recertified and 67 certifications were cancelled (mainly Indian schools no longer coming within the terms of the Act); and 454 biennial questionnaires were sent out to certified institutions. At the end of the year, a total of 547 institutions were certified for sales tax refunds.

Incorporation Under the Federal Companies Act

Applications from welfare, recreation, and sports organizations for incorporation under the Federal Companies Act were examined by the Welfare Branch at the request of the Secretary of State.

Other Activities

During the year, the Deputy Minister of Welfare served as chairman of the United Nations Economic and Social Council Committee on Program Appraisals and as chairman of the Special Pensions Review Group set up to examine the United Nations Joint Staff Pension Fund. A number of meetings of the committees were held throughout the year in New York and in Geneva. He also continued to serve as president of the International Conference on Social Work and participated in the planning of arrangements for the Tenth Conference to be held in Rome in January 1961.

As in other years, the Department arranged programs, through the Research and Statistics Division, for training in welfare under the auspices of the Colombo Plan, United Nations, and other technical assistance programs.

STATEMENT OF MAIN WELFARE EXPENDITURES 1959-60

	<i>Administration</i>	<i>Net Federal Payments</i>
Welfare Branch	\$ 47,974	
Unemployment Assistance		\$ 40,166,426
Family Allowances	2,924,196	491,214,359
Old Age Security		574,887,046
Old Age Assistance	112,184	30,349,393
Blind Persons Allowances		4,197,087
Disabled Persons Allowances		16,050,514

Details as to the programs whose expenditures are shown in the foregoing statement are set out in the following pages.

FITNESS AND RECREATION CONSULTANT SERVICES

The Consultant on fitness and recreation continued to provide services to federal and provincial government departments, national associations, colleges, and universities. In addition, reference assistance was provided to investigators conducting research, to professional study groups, to press, radio and television personnel, and to Canadians carrying on advanced studies in other countries.

The type of services requested over the past three years indicates a notable change in emphasis. In the fitness field, the major problems have concerned scientific and physiological research relating to physical efficiency and conditioning exercise in terms of individual characteristics, environment, and personal demands. In recreation, leadership problems, both volunteer and professional, emphasize not only a serious scarcity, but also the lack of essential recruitment and training services.

During the year, the entire "Track and Field" series of twelve pamphlets and the official Rule Book were revised. The three "Here's How To Do It" visual aid catalogues, along with information concerning acquisitions made since 1953 were consolidated into a single volume. Assistance was provided to the Royal Canadian Air Force in respect to three of its publications.

The Canadian Physical Efficiency Tests continued to provide a practical means of assessing physical efficiency as evidenced by motor performance. The results of the status study conducted over the past three years should become available during 1960-61.

The Consultant represented the Department at the biennial conference of the Canadian Association for Health, Physical Education and Recreation; the annual meetings of the Canadian Sports Advisory Council; the Amateur Athletic Union of Canada; and the Canadian Legion's Sports Training Program. The Consultant served as chairman of the Physical Fitness Research Committee of the American College of Sports Medicine. In recognition of services which contributed to the organization and establishment of the International Council on Health, Physical Education and Recreation within the World Confederation of the Teaching Profession, the Consultant was presented with an honorary membership in the American Association for Health, Physical Education and Recreation, which sponsored and integrated the project.

FAMILY ALLOWANCES AND OLD AGE SECURITY DIVISION

The expansion, in terms of numbers of recipients, which has always characterized both the Family Allowances and Old Age Security programs occurred again in the fiscal year ended March 31, 1960. It is interesting to note, however, that the rate of growth was not quite so rapid as in some earlier years. This will be seen from a comparison of the increase in the numbers of active accounts during the past year with the increase in the previous year. There were no especially remarkable developments in 1959-60 in either program, but efforts were continued in improving methods and procedures.

At the end of the year, there were 2,563,181* active Family Allowances accounts maintained in Regional Offices. This represented an increase of 58,992 over the number maintained at the end of the previous year. The increase at the end of the year 1958-59, over the number at the end of the preceding year, was 85,279. Active Old Age Security accounts in Regional Offices at March 31, 1960, numbered 886,448*, as compared with 863,540 at the end of the year 1958-59. Here the increase was 22,908, whereas the increase at the end of the previous year was 27,492. The percentage increase in Family Allowances and Old Age Security accounts over the year just ended was approximately 2.4 per cent.

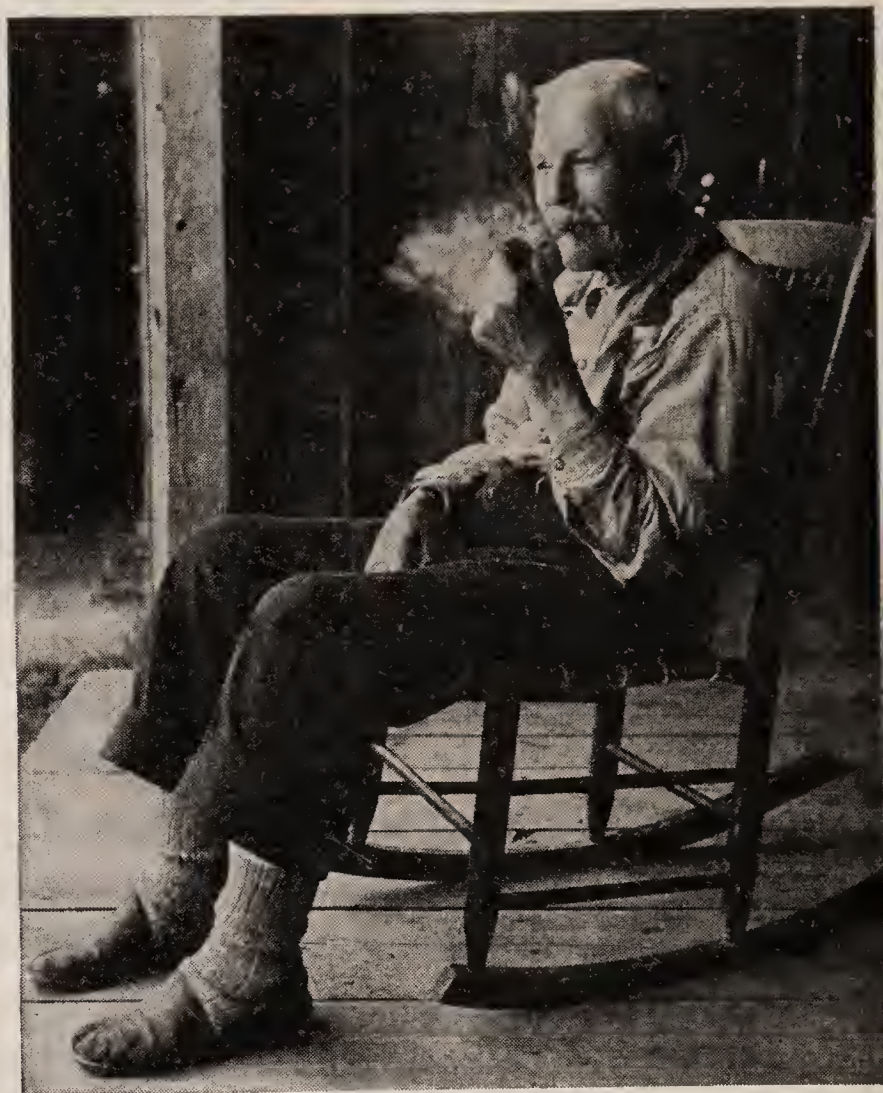
STAFF

Once again, there were some changes among senior officers of the Division in the last year. In the previous year, Mr. J. Albert Blais had vacated the position of Assistant Director of the Division to assume the position of Director. A promotional competition was held during 1959-60 to fill the vacancy, and as a result, Mr. R. H. Parkinson became the Assistant Director. Mr. Parkinson had previously served for a number of years as Chief Supervisor of Welfare Services in the Division. An open competition has been held to fill the latter position, and it is expected that the successful candidate will assume his duties early in the year 1960-61. Another open competition was arranged for the purpose of obtaining a successor to Mr. J. G. Parsons, the Regional Director for Nova Scotia, who had transferred to another department. The successful candidate was Mr. M. T. Blue, who was formerly Executive Director of the Children's Aid Society of Halifax.

There were 844 employees on the staff of the Division at the end of the year, four fewer than at the end of the previous year. Again there was considerable variation in the percentages of staff turn-over among Regional Offices, the highest being about 25 per cent.

ACCOMMODATION

The headquarters of the Division, located in the Copeland Building after the explosion which destroyed the interior of the Jackson Building, was renovated during the year and is now adequate. No Regional Office was relocated in the



*It will be noted that in the case of both Family Allowances and Old Age Security, the number of active accounts maintained is greater than the number of accounts in pay, as shown later in this Report and in the attached tables. The difference results from the fact that at all times there are some accounts where payment has been suspended for various reasons.

year just ended. In several cases quarters are becoming cramped, and in some there is no room for normal expansion. It is expected that new accommodation will be provided in certain areas, and in others, additional space.

COSTS OF ADMINISTRATION

The following is a comparison between the costs of administering the Family Allowances and Old Age Security programs in the fiscal years 1958-59 and 1959-60:

	<i>Dept. of National Health and Welfare</i>	<i>Dept. of Finance (Treasury)</i>	<i>Dept. of Public Works</i>	<i>Total</i>
1958-59	\$2,944,807.35	\$4,045,369.81	\$221,254.06	\$7,211,431.22
1959-60	2,924,195.76	4,218,531.80	204,431.81	7,347,159.37

As shown, the total cost of administering the two programs in the past year was slightly higher than in the year before. This amounted, however, to only .68 per cent of the total gross expenditures of Family Allowances and Old Age Security.

It should be noted that of \$4,218,531.80 Finance Treasury costs, \$1,970,104.63 were expended for postage on cheques. This amounted to 47 per cent of the total Treasury costs.

WELFARE SERVICES

No significant change in either the volume or the kinds of cases dealt with in the Welfare Sections of Regional Offices was encountered in the year 1959-60. A shortage of professional staff has, however, again become a problem.

The number of cases requiring investigation remained fairly high. During the year, 3,130 cases required at least one home visit by a social worker before a Family Allowances or Old Age Security problem could be satisfactorily resolved.

An encouraging fact is that in only 175 cases did this administration find it necessary, in the past year, to divert Family Allowances to a third party for administration because of mismanagement by the family.

The work involved in maintaining contact with child-placing agencies and child-caring institutions has been continued. During the year just ended, 869 visits to such agencies and institutions were carried out.

The bulk of the work related to the administration of the Old Age Security Act continues to be in connection with the appointment of private trustees to administer pension payments on behalf of pensioners who are incapable of managing their own affairs. During the year 1959-60 there were 13,373 such cases dealt with. This was an increase over the number handled in the previous year, which is understandable in view of the growth of the program.

In an endeavour to keep up contact with institutions housing older citizens, the social workers of the Division called on 347 such institutions in the past year. While the Ontario Regional Office in Toronto has not as yet been able to move to its new location, it is expected that the new quarters in a federal building will be ready for occupancy within a few months.

Family Allowances

PAYMENTS

In the year 1959-60, total net payments of Family Allowances were \$491,214,358, an increase of \$16,427,291 over the net payments in the preceding year. Tables 32 and 33 appended hereto give additional details respecting payments of Family Allowances.

The decline in the rate of expansion of the program, mentioned at the beginning of this report, is again pointed up when comparing the numbers of families and children receiving Family Allowances, and the expenditures made, in the month of March 1960, with those in the month of March 1959. The increases, shown in the following table, are not as great as those noted when comparing the scope of the program in March 1959, with that in March 1958:

	<i>No. of Families</i>	<i>No. of Children</i>	<i>Expenditures</i>
March, 1960	2,551,264	6,219,989	\$41,517,849
March, 1959	2,492,581	6,035,256	40,262,527
	<hr/>	<hr/>	<hr/>
Increase	58,683	184,733	\$ 1,255,322

At the end of the year 1959-60, the total amount of Family Allowances outstanding as overpaid was \$210,731.21. At the end of the previous year it was \$206,337.44. This was a very slight increase, considering that, during the year under review, a gross amount of over \$491,000,000 was paid in Family Allowances.

It should be noted that the total amount listed as outstanding at any time is the balance of all overpayments which occurred since Family Allowances were first paid in 1945, less the collections which have been made and lesser amounts deleted from the accounts as uncollectable by authority of Treasury Board. Table 34 appended hereto shows a breakdown, by category, of the overpayments outstanding at March 31, 1960.

Again, at the end of the past year, Ontario was the province having the largest numbers of families and children receiving Family Allowances and in which the largest expenditure was made. It is of interest that in Ontario and in Quebec, the province having the next largest population, the rate of growth in the numbers of families receiving allowances was approximately the same, roughly 2.6 per cent. There was a significant difference, however, in the rate of increase in the numbers of children for whom allowances were paid, that in Ontario being about 3.8 per cent and that in Quebec about 2.5 per cent.

OVERPAYMENTS

School Attendance and Employment—Again in the last year, fewer children lost Family Allowances for one or more months because of non-attendance at school than in the preceding year. In 1958-59, there were 7,515 children for whom allowances were suspended for this reason, whereas in 1959-60, there were 6,994 such children. Allowances were reinstated, during the year just ended, on behalf of 4,477 children who had resumed attendance at school.

There was a slight decrease in the number of children for whom Family Allowances were lost because of employment in the past year. In 1958-59, there were 16,478 children in this category, whereas last year there were 16,026. Allowances were reinstated during the year on behalf of 1,320 children who ceased to be employed.

Old Age Security

PAYMENTS

In the last month of the past fiscal year, March 1960, Old Age Security pensions were paid to 876,410 persons, an increase of 22,126 over the number receiving pensions in March 1959. Total net payments for March 1960, were \$48,483,276. These exceeded those for March 1959, by \$1,208,605. The total net payments for 1959-60 were \$574,887,046. Table 35 gives further details regarding payments of Old Age Security pensions.

OVERPAYMENTS

Each year, certain payments made to pensioners must be considered as having been improperly paid, usually because of the pensioners having been absent from Canada and ineligible for pension for some months. These amounts are added to outstanding overpayments made in earlier years. At the same time, collections are being made continuously. At the end of March 1960, the total amount of outstanding overpayments of Old Age Security, out of all the payments made since January 1952, amounting to several billions of dollars, was \$39,069.93. This is a decrease of \$1,636.07 from the amount outstanding at March 31, 1959, which was \$40,706.

PROOF OF AGE

Despite the fact that it is possible for a relatively high percentage of applicants for pension to obtain a certificate of their birth or baptism as evidence of their date of birth, there are still a good number who are unable to do so. In the latter cases, applicants are requested to submit other acceptable types of documents and every assistance is given by Regional Directors to these persons in attempting to establish their correct age for pension purposes. In the majority of cases, they are successful in doing so. Where satisfactory evidence is not available, a tribunal, as provided for in the Old Age Security Regulations, is arranged so that a date of birth for pension purposes may be fixed. In the year 1959-60, there were 436 such tribunals convened, as compared with 538 in the previous year. In 268 of the 436 cases, the decision of the tribunal was in favour of the applicant, and in 168 cases, not in favour.

ABSENCES FROM CANADA

In the past year, 14,457 pensioners returned to Canada after an absence and had their pensions paid retroactively for the full period of absence, with no loss whatever. They had taken advantage of the provisions of the Old Age Security Act whereby pension may be paid, in addition to the payments for the months of departure and return, for up to six months of absence in any calendar year, so

long as the pensioner returns to Canada within six months of the last day of the month in which he departs. Pensioners who had their pensions reinstated on return from an absence, but with a loss of payment for one or more months, numbered 231; of these, 180 pensioners lost payment for more than six months. The records of the Division indicate that 295 recipients of Old Age Security pension left Canada permanently during the past year. The announcement in the Speech from the Throne in January 1960, to the effect that it was the Government's intention to recommend to Parliament an amendment to the Old Age Security Act which would make it possible to pay the pension outside of Canada to qualified persons aroused a great deal of interest. This was evidenced by the large number of inquiries addressed to the Division by pensioners and other interested persons.

DEPARTMENT OF NATIONAL HEALTH AND WELFARE COMPARATIVE STATEMENT OF FAMILY ALLOWANCES PAYMENTS
BETWEEN MONTH OF MARCH 1959 AND MONTH OF MARCH 1960

ANNUAL REPORT

TABLE 33

DEPARTMENT OF NATIONAL HEALTH AND WELFARE NET FAMILY ALLOWANCES PAYMENTS
COMPARISON BY FISCAL YEARS

Province	1948-49	1949-50	1950-51	1951-52	1952-53	1953-54
Newfoundland.....		9,747,030.00	10,224,103.00	10,613,908.00	11,038,874.49	11,497,719.33
Prince Edward Island.....	2,295,286.00	2,411,291.00	2,467,257.00	2,495,987.00	2,522,830.00	2,558,097.00
Nova Scotia.....	14,515,131.00	15,291,614.07	15,660,003.27	15,949,540.73	16,297,169.95	16,716,374.00
New Brunswick.....	12,462,093.00	13,375,434.33	13,708,198.00	13,892,907.00	14,287,535.05	14,700,819.00
Quebec.....	89,304,108.45	95,901,763.15	99,558,247.04	102,883,811.56	107,084,124.36	111,441,301.49
Ontario.....	80,151,249.69	84,940,808.63	89,034,870.53	93,207,144.30	98,303,868.20	104,409,819.41
Manitoba.....	15,016,277.72	15,668,695.50	16,235,519.56	16,703,466.69	17,283,659.61	17,979,853.88
Saskatchewan.....	18,527,408.22	18,953,599.79	19,237,070.80	19,424,561.76	19,723,352.42	20,244,540.00
Alberta.....	18,695,325.00	19,822,386.97	20,762,273.29	21,573,429.99	22,575,583.60	23,958,080.50
British Columbia.....	19,347,836.58	20,813,661.00	21,952,569.36	23,063,642.85	24,399,858.81	25,904,496.28
Yukon & Northwest Territories.....	595,063.00	587,749.50	625,348.67	649,273.15	680,828.30	702,801.30
NATIONAL.....	\$270,909,778.66	\$297,514,033.94	\$309,465,460.52	\$320,457,673.03	\$334,197,684.79	\$350,113,902.19

Province	1954-55	1955-56	1956-57	1957-58	1958-59	1959-60
Newfoundland.....	11,967,775.00	12,414,789.00	12,881,415.00	14,131,153.26	15,162,900.03	15,566,372.10
Prince Edward Island.....	2,590,704.00	2,621,722.00	2,640,585.00	2,824,310.34	2,994,334.00	3,062,692.50
Nova Scotia.....	17,147,920.00	17,596,684.40	17,973,392.00	19,400,493.32	20,560,461.88	20,932,794.00
New Brunswick.....	15,073,324.00	15,451,544.00	15,779,360.00	17,074,970.00	18,201,518.00	18,588,795.25
Quebec.....	116,057,182.00	120,389,837.92	124,368,344.00	136,080,634.08	146,278,434.72	150,462,530.66
Ontario.....	110,492,480.00	116,604,314.27	122,539,123.00	136,706,313.83	150,186,253.35	156,681,499.79
Manitoba.....	18,705,349.00	19,418,713.24	19,888,717.00	21,520,778.50	23,091,594.01	23,730,765.46
Saskatchewan.....	20,894,790.00	21,401,114.00	21,644,971.00	23,241,829.00	24,789,277.50	25,363,935.50
Alberta.....	25,390,585.00	26,752,793.00	27,953,311.00	31,029,720.19	34,122,637.00	35,765,853.54
British Columbia.....	27,405,872.00	29,097,077.14	31,029,472.00	34,969,036.05	38,409,308.36	39,984,175.79
Yukon & Northwest Territories.....	739,983.00	786,437.15	819,150.00	907,321.25	990,349.00	1,074,944.05
NATIONAL.....	\$366,465,964.00	\$382,535,026.12	\$397,517,840.00	\$437,886,559.82	\$474,787,067.85	\$491,214,358.64

TABLE 34

DEPARTMENT OF NATIONAL HEALTH AND WELFARE OVERPAYMENTS OF FAMILY ALLOWANCES MARCH, 1960
(The overpayments may have occurred at any time between July 1, 1945 and March 31, 1960)

Province	Overpayments Recoverable by Deduction		Overpayments Recoverable by Collection		Overpayments Considered Uncollectable		Total Overpayments Outstanding	
	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount	Number of Accounts	Amount
Newfoundland.....	36	640.00	30	1,006.86	53	980.50	119	2,627.36
Prince Edward Island.....	14	130.00	2	124.00	9	243.50	25	497.50
Nova Scotia.....	34	1,070.00	68	1,144.00	140	3,638.25	242	5,852.25
New Brunswick.....	27	914.00	53	814.00	135	5,027.00	215	6,755.00
Quebec.....	323	19,196.05	521	29,162.66	991	55,842.63	1,835	104,201.34
Ontario.....	166	8,439.42	514	14,719.14	1,031	22,122.19	1,711	45,280.75
Manitoba.....	22	1,006.00	53	804.00	88	2,707.00	163	4,517.00
Saskatchewan.....	26	1,482.00	72	3,255.00	95	6,787.00	193	11,524.00
Alberta.....	80	3,301.00	129	4,565.00	147	5,518.69	356	13,384.69
British Columbia.....	87	3,255.00	60	2,329.00	168	5,704.32	315	11,288.32
Northwest Territories & Yukon.....	18	1,815.00	112	2,549.00	8	439.00	138	4,803.00
NATIONAL.....	833	\$41,248.47	1,614	\$60,472.66	2,865	\$109,010.08	5,312	\$210,731.21*

* In addition to this amount outstanding, there has been deleted as uncollectable by Treasury Board authority between July, 1945 and March 31, 1960, a net amount of \$144,677.71.

TABLE 35
DEPARTMENT OF NATIONAL HEALTH AND WELFARE STATISTICS ON OLD AGE SECURITY

Province	No. of Pensioners in Pay March 1959	Net Payment for March 1959, only	No. of Pensioners in Pay March 1960,	Net Payment for March 1960, only	Total Net Payment for Fiscal Year Ended March 31, 1959	Total Net Payment for Fiscal Year Ended March 31, 1960
Newfoundland.....	16,782	925,258	17,008	943,952	11,012,906	11,131,339
Prince Edward Island.....	7,153	395,509	7,278	401,459	4,809,942	4,823,008
Nova Scotia.....	40,395	2,249,021	40,679	2,262,228	26,780,353	27,012,650
New Brunswick.....	29,509	1,641,694	29,965	1,665,227	19,583,702	19,906,303
Quebec.....	179,829	9,945,313	184,500	10,214,778	116,993,184	120,318,812
Ontario..	310,094	17,086,362	317,727	17,496,498	203,257,138	208,616,082
Manitoba.....	52,066	2,884,688	53,284	2,952,547	34,029,850	35,046,515
Saskatchewan	53,469	2,962,386	55,233	3,063,731	35,099,989	36,311,467
Alberta.....	55,968	3,124,708	58,386	3,257,719	36,534,769	38,153,437
British Columbia	108,396	6,023,573	111,742	6,198,708	70,769,169	73,155,743
Yukon & Northwest Territories.....	623	36,159	608	35,429	408,856	411,690
NATIONAL.....	854,284	\$47,274,671	876,410	\$48,483,276	\$559,279,858	\$574,887,046

OLD AGE ASSISTANCE

ALLOWANCES FOR BLIND PERSONS AND ALLOWANCES FOR DISABLED PERSONS

Old Age Assistance

Through the operations of a federal-provincial plan, old age assistance is provided for persons 65 to 69 years of age. The provinces and territories administer assistance under the authority of provincial and territorial legislation. Where assistance is provided to these persons and under the conditions specified in the Old Age Assistance Act and the Old Age Assistance Regulations, they may claim reimbursement from the Government of Canada of 50 per cent of the amounts paid out by them to recipients.

When the Act came into operation on January 1, 1952, the maximum assistance sharable by Canada with the provinces and territories was \$40 a month. This amount was increased to \$46 a month from July 1, 1957 and to \$55 a month from November 1, 1957. The maximum amounts of income allowed were also increased. For an unmarried person the amount, including assistance, is now \$960 a year. For a married person it is \$1,620 a year or \$1,980 if the spouse is blind.

The Act provides for agreements between Canada and each province and territory. In its agreement, a province may specify the amount of assistance it wishes to pay and also the amounts of income it will allow. In the agreements now in force the amounts shown are the maximum amounts specified in the Act.

Following the amendments of 1957, there was a considerable increase in the number of recipients. The increase in number along with the increase in the maximum assistance payable resulted in a substantial rise in the amount of federal payments.

About 21 per cent of the population 65 to 69 years of age receives old age assistance. The percentage has varied little since the Act came into operation. Each year some 22,000 recipients of old age assistance are transferred to old age security on reaching the age of 70 years.

Administrative procedures are set forth in the Old Age Assistance Regulations. Changes in the regulations may be recommended from time to time by an Advisory Board established by the Act and consisting of two representatives of the Government of Canada and two representatives of each of the provinces and the territories.

Statistics referring to old age assistance appear at the end of the report on this Division.

Allowances for Blind Persons

Like old age assistance, allowances for blind persons are provided under a federal-provincial plan, the conditions applying to the federal contribution being set forth in the Blind Persons Act. The maximum allowance is the same, \$55 a month, but the maximum permissible amounts of income, including allowance, are higher, being \$1,200 a year in the case of an unmarried person (\$1,680 where

there is a dependent child), \$1,980 a year in the case of a married person and \$2,100 in the case of a married person with a blind spouse. In the agreements with the provinces and territories the amounts shown are those specified in the Act. The federal share is 75 per cent.

The Blind Persons Act, which came into effect on January 1, 1952, was amended in 1955 to lower the age requirement from 21 to 18 years and to increase the maximum amounts of income allowed. It was amended twice in 1957 to increase the maximum allowance from \$40 to \$46 a month and from \$46 to \$55 a month and to increase the amounts of maximum income allowed. The second amendment authorized the amounts of income allowed shown above.

The last two amendments to the Act substantially increased both the number of recipients and the federal contributions to the provinces and territories.

Each year about 300 recipients of blindness allowances reach the age of 70 and are transferred to old age security.

While the provinces and territories administer allowances for blind persons, the decision on the medical test of blindness is a federal responsibility. Applicants are examined by oculists employed by the Government of Canada. The reports of the oculists are forwarded to the Chief of the Blindness Control Division in the Health Branch of the Department of National Health and Welfare who decides in each case whether the applicant meets the test of blindness in the Blind Persons Regulations.

Administrative procedures are set forth in the regulations which are generally similar to the regulations applying to the administration of old age assistance. An Advisory Board with authority to recommend changes in the regulations is established by the Act.

Statistics on allowances for blind persons are shown at the end of the report on this Division.

Allowances for Disabled Persons

The provision for paying allowances for disabled persons is similar to the procedures under the other two Acts. The maximum amount of allowance payable is \$55 a month. The maximum amounts of income allowed are the same as for old age assistance, \$960 a year in the case of an unmarried person, \$1,620 a year in the case of a married person, and \$1,980 in the case of a married person with a blind spouse. All amounts include the allowance payable. The agreements with the provinces and territories provide for payment of the maximum allowance and stipulate the amounts of income allowed as being the amounts specified in the Disabled Persons Act. The federal share is 50 per cent.

The Act, which came into operation on January 1, 1955, was amended twice in 1957 to increase the maximum allowance and the maximum amounts of income allowed. From July 1, 1957, the allowance was increased from \$40 to \$46 a month and from November 1, 1957, from \$46 to \$55 a month. The amounts of income allowed shown above were effective from November 1, 1957.

As in the case of the other two programs, there has been a substantial increase in the amount of the federal payments for disability allowances since the amendments of 1957. In addition to the increase in the maximum allowance payable there has been a steady rise in the number of recipients to about 50,000.

Only a small number of recipients of disabled persons allowances are transferred to old age security, partly due to the fact that in many cases old age assistance is substituted for disability allowance at 65. This change is made because the administration of old age assistance is simpler with no medical test to be taken into account.

Under the procedure for dealing with the test for total and permanent disability the evidence is considered by medical doctors employed by the province and by the Government of Canada, usually acting together as members of a review board. Where there is a difference of opinion the case may be referred to a medical referee. The Government of Canada may, by agreement, share with a province the cost of engaging medical referees and the cost of special examinations. As with the other two Acts, the province decides upon applications for disability allowances and makes monthly payments to recipients.

TABLE 36
(Old Age Assistance)
NUMBER OF RECIPIENTS, AVERAGE MONTHLY ASSISTANCE AND TOTAL FEDERAL PAYMENTS, UNDER THE OLD AGE ASSISTANCE ACT, BY PROVINCES
For the Fiscal Year 1959-60

Province	Number of Recipients Mar. 31, 1960	Average Monthly Assistance Mar. 31, 1960	Federal Payments
Alberta.....	6,336	\$50.52	\$1,955,162.45
British Columbia.....	7,391	51.67	2,353,754.69
Manitoba.....	4,998	51.55	1,580,918.16
New Brunswick.....	5,682	51.32	1,788,776.68
Newfoundland.....	5,377	53.15	1,736,290.55
Nova Scotia.....	5,477	48.82	1,619,202.85
Ontario.....	22,544	48.79	6,608,442.92
Prince Edward Island.....	750	45.69	204,795.00
Quebec.....	34,312	51.69	10,688,151.37
Saskatchewan.....	5,726	50.64	1,757,262.44
Northwest Territories.....	128	52.39	40,266.95
Yukon Territory.....	52	54.90	14,524.00
Total.....	98,773		30,347,548.06

The Disabled Persons Regulations, dealing mainly with administrative procedures, follow closely most of the provisions in the Old Age Assistance Regulations and the Blind Persons Regulations. There are additional regulations dealing

with institutions which, under the other two Acts, do not enter into the test of eligibility. The definition of the expression “totally and permanently disabled” is in the regulations. The Disabled Persons Act also establishes an advisory board.

Statistics on disabled persons allowances will be found at the end of the report on this Division.

TABLE 37

(Blind Persons Allowances)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ALLOWANCE AND TOTAL FEDERAL PAYMENTS, UNDER THE BLIND PERSONS ACT, BY PROVINCES

For the Fiscal Year 1959-60

Province	Number of Recipients Mar. 31, 1960	Average Monthly Allowance Mar. 31, 1960	Federal Payments
Alberta.....	459	\$53.43	\$ 223,872.96
British Columbia.....	541	53.59	263,096.68
Manitoba.....	396	53.29	195,335.91
New Brunswick.....	706	53.88	348,796.68
Newfoundland.....	418	54.15	200,643.89
Nova Scotia.....	773	53.51	378,784.18
Ontario.....	1,847	50.27	839,339.82
Prince Edward Island.....	85	53.21	41,727.08
Quebec.....	3,012	54.06	1,494,170.00
Saskatchewan.....	397	53.70	195,648.92
Northwest Territories.....	34	49.08	14,936.24
Yukon Territory.....	3	55.00	1,815.00
Total.....	8,671	.....	4,198,167.36

TABLE 38

(Disabled Persons Allowances)

NUMBER OF RECIPIENTS, AVERAGE MONTHLY ALLOWANCE AND TOTAL FEDERAL PAYMENTS, UNDER THE DISABLED PERSONS ACT, BY PROVINCES

For the Fiscal Year 1959-60

Province	Number of Recipients Mar. 31, 1960	Average Monthly Allowance Mar. 31, 1960	Federal Payments
Alberta.....	1,702	\$53.06	\$ 536,719.76
British Columbia.....	1,866	54.00	574,686.13
Manitoba.....	1,376	53.98	433,097.12
New Brunswick.....	1,874	54.20	596,463.31
Newfoundland.....	1,128	54.56	348,585.99
Nova Scotia.....	2,484	52.67	759,392.53
Ontario.....	12,354	53.76	3,858,355.14
Prince Edward Island.....	650	52.73	197,988.26
Quebec.....	25,103	54.01	8,307,725.60
Saskatchewan.....	1,337	54.28	433,225.88
Northwest Territories.....	12	55.00	3,950.50
Yukon Territory.....	3	55.00	770.00
Total.....	49,889	.....	16,050,960.22

UNEMPLOYMENT ASSISTANCE

During the year, the Province of Quebec and the Yukon Territory signed Unemployment Assistance Agreements under the Unemployment Assistance Act, thereby bringing all jurisdictions within the terms of the legislation and making the unemployment assistance program nation-wide in its scope.

The Unemployment Assistance Act, which was passed in 1956 and amended in 1957, empowers the federal government to enter into agreements with the provinces under which it will contribute 50 per cent of the costs of the unemployment assistance incurred by a province or by a municipality within the province. The rates of assistance and the conditions under which assistance may be granted are determined by the province or municipality. Expenditures for both employable and unemployable persons who are unemployed and in need may be included and the costs of maintaining persons in "homes for special care", such as homes for the aged or nursing homes, are sharable under the Agreement. Travelling expenses may be included for certain defined purposes.

The Agreement provides for the exclusion of payments made in respect of medical, hospital, nursing, dental, and optical care, drugs and dressings, funeral expenses, and the costs of administration.

During the year, the position of Officer in Charge of Unemployment Assistance was established and an appointment made June 2nd, 1959. The program continued, as in earlier years, to be under the general direction of the Deputy Minister of Welfare. The Officer in Charge of Unemployment Assistance visited the Yukon Territory and, together with the Chief Treasury Officer of the Department, travelled to all of the provinces for discussions on matters affecting the program.

The total expenditure for unemployment assistance during the year 1959-60 was \$40,166,426. Part of this expenditure, \$10,035,173, covered the federal share of claims that related to a period prior to the fiscal year 1958-59. On the other hand, because the provinces may submit claims up to six months after the month in which the assistance was given, there are still a number of claims for expenditures made by the provinces and municipalities during 1959-60 that were not received by the close of the fiscal year. The extent of the payments made in respect to these claims will appear in the next Annual Report.

Table 39, following, shows the total payments made by the Federal Government to the provinces under the Unemployment Assistance Agreements during 1959-60 and Table 40 gives the number of persons assisted under the Agreements in one month of each quarterly period during the year.

TABLE 39

FEDERAL-PROVINCIAL UNEMPLOYMENT ASSISTANCE AGREEMENTS:
FEDERAL SHARE, BY PROVINCE, 1959-60

	Amount*
Newfoundland	3,670,091.23
Prince Edward Island	113,096.06
Nova Scotia	654,039.07
New Brunswick	351,252.29
Quebec	7,790,530.49**
Ontario	14,028,522.74
Manitoba	2,380,230.83
Saskatchewan	1,828,312.86
Alberta	2,071,493.75
British Columbia	7,245,438.85
Northwest Territories	33,417.74
Total	<u>\$ 40,166,425.91</u>

*The amounts shown are the federal payments made during the fiscal year. They relate to claims submitted for months prior to the fiscal year and to the claims for the year which were submitted and paid prior to March 31, 1960.

**The claims for the Province of Quebec were being audited at the end of the fiscal year and the amounts shown represent 80 per cent of the amounts claimed.

TABLE 40

FEDERAL-PROVINCIAL UNEMPLOYMENT ASSISTANCE AGREEMENTS:
PERSONS ASSISTED, BY PROVINCE, DURING THE MONTHS OF
APRIL, JULY AND OCTOBER 1959 AND JANUARY 1960

Province	April 1959	July 1959	October 1959	January 1960
Newfoundland	65,494	49,854	53,821	56,896
Prince Edward Island	1,422	1,139	1,304	2,062
Nova Scotia	9,887	8,741	8,710	10,682
New Brunswick	7,815	5,871	6,238	8,631
Quebec	49,924	40,612	42,846	53,577
Ontario	76,710	63,065	62,324	79,688
Manitoba	15,363	13,787	15,517	19,112
Saskatchewan	15,116	12,963	12,978	17,628
Alberta	15,479	13,480	12,958	16,968
British Columbia	38,441	35,199	36,278	41,466
Northwest Territories	141	126	184	220
Total	<u>295,792</u>	<u>244,837</u>	<u>253,158</u>	<u>306,930</u>

CIVIL DEFENCE

Emergency Welfare Services Division

During the year, in accordance with the provisions of the Civil Defence Order-In-Council, P.C. 1959-656, of May 28, 1959, which became effective September 1, 1959, concerning the reorganization of the Civil Defence program of the Government of Canada and its inclusion within the broader framework of the Emergency Measures Organization, there was a rearrangement within the Department of National Health and Welfare. This provided for the implementation of those emergency planning and Civil Defence functions which remain the responsibility of this Department.

As a result of this reorganization, Civil Defence Health Services has become the Emergency Health Services Division; a separate division within the Directorate of Health Services of the Health Branch. The new division has been given greater responsibilities than those of the former Civil Defence Health Service. In addition to its responsibilities in Civil Defence, which are mainly concerned with assistance to the provinces and others in the development of medical, hospital, and public health emergency services in the immediate post-disaster period, it has now been assigned additional duties in connection with:

- a) planning for the provision of emergency civilian health services during the long rehabilitation period and for the duration of the emergency.
- b) co-ordination of health services arrangements for emergency government.

A modest increase in staff has been included in the 1960-61 estimates to begin this extended program.

In the redistribution of federal Civil Defence responsibilities, the Armed Services were given a major role and some of their new duties had health im-

plications. In the development of the Civil Defence Health Service program there had always been close liaison between health officials of this Department and officers of the Armed Forces Medical Service. Following the reorganization of Civil Defence, this liaison became more active and an interdepartmental health planning committee was requested by this Department and authorized by the cabinet committee on emergency planning. This committee which is chaired by an official of this Department consists of senior medical officers of the Department of National Defence, the Department of Veterans Affairs, and the Department of National Health and Welfare. The purpose of this committee is to delineate the Civil Defence responsibilities of the respective federal health services and to co-ordinate their programs so that duplication is avoided and maximum effectiveness is achieved. This committee is active and has had several meetings.

During 1959 two federal-provincial ministers' conferences were held—one in May and the other in October. At these conferences, it was proposed that provincial governments should be responsible for the organization, development, and operation of Emergency Health Services, the role of the Department of National Health and Welfare being to assist them in this work. The new proposals were discussed at the October 1959 meeting of the Dominion Council of Health, and the federal Emergency Health Services arranged for a national conference on the health aspects of Civil Defence and emergency planning. A successful conference was held at the Canadian Civil Defence College in Arnprior, in November, which was attended by more than 100 delegates, including representatives of all provincial health departments, national professional health organizations and agencies, the medical and dental services of the Department of National Defence, other federal government departments with health interests, and by members of the Defence Medical and Dental Services Advisory Board. The conference was productive of many sound suggestions and recommendations in connection with the establishment of civilian Emergency Health Services across Canada.

On the 28th and 29th of May, 1959, the eighth hospital disaster institute was held in Saskatoon, Saskatchewan. This institute was arranged for senior hospital officials in the Provinces of Manitoba and Saskatchewan since an institute had not been held for this area. Over 100 senior hospital representatives attended and studied hospital disaster planning.

The Special Weapons Section of Emergency Health Services has completed the Nuclear Weapons Section of the "Emergency Health Services Manual". It has also continued its studies on the health aspects of biological and chemical warfare. As a result of the extension of the duties of this division, officers of the Special Weapons Section have had an extension of their duties in that they have represented Emergency Health Services on numerous panels, committees, and working parties, such as the Emergency Measures Organization Working Parties on Fallout Shelters and Research, and the Defence Research Board Biological Warfare Advisory Committee. The medical consultant of this section has also been largely responsible for organizing and conducting the physicians and dentists indoctrination courses.

Throughout the year, progress was made in the procurement and packaging of health supplies for stockpiling. Of the \$11,000,000 authorized for the general

stockpile, orders have now been placed to the value of approximately \$10,000,000. Functional packaging of supplies for long-term storage is proceeding satisfactorily. The building of medical equipment depots by the Department of National Defence across the country for joint storage of their medical supplies and the health supplies stockpile is expected to be completed in the very near future. It is anticipated that distribution to these regional depots of a large portion of the supplies for the stockpile will be completed during 1960.

Encouraging progress has been made in civilian training in the emergency aspects of home nursing. Additional Home Nursing Training Kits were made available to the two teaching agencies responsible for home nursing training, namely the St. John Ambulance Association and the Canadian Red Cross Society. Nearly 17,000 lay persons completed a course in home nursing training during 1959.

During the period under review, fewer health courses than usual were held at the Canadian Civil Defence College because of the reorganization of Civil Defence and the holding of the National Emergency Health Services Conference. Two courses for nurse educators, one course for physicians and dentists, and one course for casualty simulators were held.

During the year, there has been greater activity in Health Branch Emergency Planning and the Division has performed liaison and co-ordinating duties in this field. The Emergency Measures Organization has also referred numerous NATO documents to the Division for information and comments which, in some cases, entailed the preparation of reports.

During the recent disaster in Agadir, Morocco, the release of supplies from the health supplies stockpile was authorized to meet a request from the Canadian Red Cross Society.

Emergency Welfare Services Division

As a result of exhaustive study by the Government of civilian defence requirements in the light of rapidly changing concepts of attack and defence, this was a year of reorientation and reorganization. Emergency functions were reallocated to several government departments and agencies and the Civil Defence Division disappeared. The Emergency Welfare Services Division was created to discharge the Department's reallocated responsibilities concerned with the development of emergency welfare services. Organization of the Division was well under way by the end of the year. Its staff consisted of the former Civil Defence Welfare Section, the Civil Service Civil Defence Section and the Supply and Resources Section.

Inasmuch as the basic principles of emergency welfare remain in substance unaltered, further progress in the development of the five Welfare Services was possible. Reception planning in the field, however, was limited because the provinces and their municipalities were busily engaged in their own reorganization. For this reason the normal Welfare Course schedule was of necessity curtailed. A total of 160 candidates attended Specialist Welfare Courses conducted by the Division at the Civil Defence College. In addition, 33 food technologists attended the first course designed especially for their profession.

Training was taken to the provinces as in former years. A Personal Services Institute was held in Manitoba for professional welfare workers and a Registration and Inquiry Course was held in New Brunswick. Ontario and Nova Scotia were assisted in the conduct of lodging surveys, and extensive training materials and guidance were supplied for local courses.

A Provincial Welfare Directors' Conference was held from which many constructive policy decisions emerged. These are being implemented as organization develops.

Changes in survival policy necessitated the review of emergency welfare doctrine and all welfare material. Revisions and changes were well under way by the end of the year.

Progress was made in the area of equipment development. A prototype mobile feeding unit capable of feeding 200 persons per hour was produced. After testing, the provinces will be encouraged to produce them as required.

Forms for the operation of the Emergency Lodging and the Emergency Clothing Services were designed, produced, and distributed in small quantities. This will ensure some measure of operational readiness.

Public educational material continued to be distributed. In co-operation with Information Services, Welfare displays were exhibited at nine large exhibitions and professional conventions. A first hand knowledge of the public's attitude toward survival planning was obtained through members of the Division manning a welfare booth for one week at a major public exhibition. The experience gained has proven most helpful in the development of later public information material and displays.

A special study of milk and milk product requirements for infants was completed and submitted for further action to the War Supplies Agency of the Department of Defence Production.

Progress was made in co-ordinating plans with Emergency Measures Organization for the continuity of Federal Welfare activities in wartime, both at Headquarters and Regional Offices.

During the latter part of the year, efforts were made to stimulate the organization of emergency welfare services within provincial Departments of Public Welfare. The Deputy Ministers of all provinces except Quebec, Nova Scotia, and Newfoundland were visited. Generally, the principle of delegation of emergency welfare functions to Provincial Welfare Departments was accepted and organization for its implementation has begun.

Liaison with Emergency Welfare Services of the Office of Civil Defence Mobilization and the Department of Health, Education and Welfare (U.S.A.) was maintained and there was reciprocal representation at welfare conferences held at Ottawa and Washington.

A major contribution towards over-all preparedness has been achieved through acceptance by the federal Post Office Department of responsibility for the design,

production, and dispersed stockpiling of safety notification postcards and change of address cards. Both of these cards will be for use only in the event of a national emergency, and would be handled free of charge by the Post Office Department.

In the reallocation of emergency functions, the Division took over the residual stores, formerly part of the Civil Defence Headquarters. Steps were taken to dispose of all training equipment to the provinces with the aim of eventually closing out the central stores.

Conferences were held with the management of three large food chains with the object of seeking their advice and enlisting their support in a public education program designed to encourage Canadians to stock emergency food supplies. As a result, new emergency feeding displays were designed and agreement was reached on methods of promoting the program whenever deemed necessary.

Civil Service Civil Defence continued to provide guidance for the

carrying out of emergency measures in government-occupied buildings. Courses in first aid, home nursing, and fire fighting were arranged and evacuation practice drills were carried out in 16 buildings. At the end of the year, there were 91 active chief building wardens covering 143 buildings. Some preliminary planning was undertaken with a view to providing guidance on the development of services and facilities necessary to protect and care for government employees should they be required to take refuge at their place of work during an attack.

Canadian Civil Defence College

The Canadian Civil Defence College was established in Arnprior in 1953. The function of the College is to train key Civil Defence personnel at federal, provincial, and local levels and to train instructors in the various aspects of Civil Defence. During the



year, the following types of courses were conducted: emergency health, emergency welfare, staff training, radiological, communications, rescue, and the technique of instruction. In addition, the National Health Conference, the Welfare Directors' Conference, and an Agrologists' Forum were held at the College.

A total of 3,128 Civil Defence personnel received instruction at the College. A provincial breakdown follows:

British Columbia	185
Alberta	144
Saskatchewan	94
Manitoba	116
Ontario	310
Quebec	230
New Brunswick	64
Nova Scotia	115
Prince Edward Island	54
Newfoundland	45
Armed Forces	737
Federal Employees	74
Others	15
Group Visits	945
Total	3,128

Sixty-three courses and three conferences were held at the College plus special visits by 21 groups who were given a brief indoctrination in Civil Defence planning and progress.

ADMINISTRATIVE BRANCH

The Administration Branch of the Department consists of the following Divisions: Departmental Secretary's, Information Services, Legal, Library, Personnel Services, Purchasing and Supply, and Research and Statistics.

Because these Divisions serve the entire Department, both across Canada and overseas, increased activities throughout the Department, as referred to elsewhere in this Report, resulted in a continuing heavy volume of work for all Divisions of the Administration Branch.

DEPARTMENTAL SECRETARY'S DIVISION

The activities of the Departmental Secretary's Division continued to fall into two broad classes—those which the Departmental Secretary carried out personally and those which were undertaken largely by the staff of the Division.

Included among the first group were (a) assisting the Minister and the Deputy Ministers in the long and complicated procedure related to the preparation and approval of the departmental estimates from the time they were first drafted until they were approved by Parliament; (b) acting as financial adviser to the Department in respect of many aspects of its work; (c) acting as the Deputy Ministers' substitute with respect to the approval of accounts payable, travel claims, requests for encumbrances, requests for transfer between allotments, submissions to Council and to Treasury Board, and other financial documents; (d) preparing material for tabling in Parliament; and (e) carrying out many special projects which were assigned from time to time.

The second group of responsibilities was borne by the various sections of the Division as outlined in the following paragraphs.

The Registry Services continued to be responsible for records management throughout the Department. This involved the operation of a central registry and nine sub-registries in Ottawa, and the provision of advice, assistance, and a certain degree of supervision in respect of records in many departmental establishments across Canada. During the year, it was necessary to establish a new sub-registry to serve the Radiation Protection Division. In addition, the records and records staff of the Personnel Division were transferred to Registry Services to form the ninth sub-registry. The records retirement program was actively pursued, resulting in considerable savings in space, equipment, and staff time. Mail, messenger and truck services at Head Office continued to be provided by this Section.

In order to reflect more accurately the responsibilities of the Accounts and Estimates Section, the name was changed during the year to Financial Services Section. This Section continued to perform a centralized accounting advisory service designed to assist the Directors and Chiefs of Divisions in the developing and budgeting of funds provided for their operational requirements. This Section also carried out much of the detail involved in the preparation of departmental estimates and continued to act as liaison between the Department and the Treasury Office serving it.

The work of the Parliamentary Papers and Correspondence Section consisted largely of preparing replies to the many thousands of letters and enquiries which were received on a wide range of health and welfare subjects. This Section was also responsible for processing, distributing, and recording all submissions, Orders-in-Council, Treasury Board Minutes, supplementary lists, Treasury Board circular letters, and other documents, and for the daily reading of all parliamentary papers and the excerpting, distributing, and indexing of items of interest to this Department.

A significant change in the organization of the Departmental Secretary's Division occurred at the very end of the past year when the multilith portion of the Duplicating Section was transferred to the control of the Department of Public Printing and Stationery. This move, involving staff, equipment, and space, resulted from a Treasury Board decision to place all duplicating services in central Ottawa under the supervision of that Department. All typing and matrice work remained the responsibility of the Department of National Health and Welfare, as did all addressograph activities. In what proved to be the final year of operation for the Duplicating Section, activity continued at a high level in spite of accommodation difficulties resulting from the explosion in the previous year. Over 14 million duplicating impressions were produced, with the many related operations representing a correspondingly heavy workload. Attention continued to be given to the maintenance of the Department's extensive addressograph lists.

A central source of typing assistance was again provided to the entire Department in Ottawa by the Secretarial Services. As well, all typing and matrice work required in the preparation of material for reproduction in the Duplicating Section was done by the Secretarial Services. Varsity facilities continued to be available.

In addition, the Departmental Secretary's office acted as an information centre for the entire Department and carried out numerous special projects which normally fall to the lot of the secretariat of a large organization.

INFORMATION SERVICES DIVISION

The facilities of this Division continued to be utilized by all other divisions to assist in the fields of health education, public information and public relations.

Health Education

While reprints again accounted for the largest proportion of funds available for health publications, several new publications made their appearance. *Food Chemists and How They Work* and *A Candid Look at Cosmetics* were produced for the Food and Drug Directorate as well as artwork completed for a third new booklet entitled, *The Consumer's Handbook*. An addition to the Child Training Series, *The Brilliant Child*, was produced for the Mental Health Division and received unusually favorable attention from the press. *Good Food Good Health* was completed for Indian and Northern Health Services Directorate and production was begun on a number of items to promote a clean-up campaign among Indians. A new pamphlet, *Ten Steps to Dental Health*, was published for the Dental Health

Division. Two sets of inserts were produced for the Family Allowances and Old Age Security Division dealing with instructions to recipients of cheques and explanations of existing regulations.

New publications produced for Civil Defence included: *Canadian Civil Defence College Information Folder*, *Civil Defence Display Catalogue*, and *Civil Defence Staff Duties and Procedure Manual*.

Work was initiated on the production of two new publications for Medical Rehabilitation and Disability Advisory Service, entitled, *Opportunities for Physio Therapists in Canada* and *Opportunities for Occupational Therapists in Canada*.

The Division assisted in the reprinting of many pamphlets, folders and booklets in their present form. Reprints, in pamphlet form, of articles which appeared in the *Occupational Health Review* and *Occupational Health Bulletin* included: *Industry and Retirement*, *The Occupational Health Nurse Specialist*, *Alcohol and the Impaired Driver*, *Care of the Hands*, *Health Teaching in Industry*, *Occupational Health Nursing as a Part of Public Health Nursing Programs*, and *Garage Health Hazards and Ventilation*.

The Noon Meal was produced for the Nutrition Division with new artwork and in a completely new format. The cover of the Child Training Series was completely revised, giving these publications a new and attractive appearance. The *Eskimo Calendar*, which was printed in English and syllabics, proved so popular that it was reprinted again during the year. *Syphilis and Gonorrhea*, the technical manual for physicians issued by the Epidemiology Division, which was revised and printed in English last year, was translated and printed in French.

In all, 369 separate printing jobs were handled, 252 of which were processed through the Queen's Printer and 117 through the Duplicating Section. At the request of five divisions, designs and artwork were supplied for 19 separate jobs.

The French version of the film, *Mystery in the Kitchen*, entitled, *Si femme voulait*, was completed. Preliminary scripting was begun for a Mental Health Division film dealing with volunteer workers in mental institutions. This will be produced next year.



A three-panel display to encourage recruitment of personnel in the field of social work was produced at the request of the Canadian Welfare Council. The Council is currently promoting its use throughout Canada. It will be produced in French next year.

Nine exhibits were produced during the year dealing with the work of the Indian and Northern Health Services Directorate, activities of the Mental Health Division, welfare education in Canada, children's assistance, Family Allowances, patent medicines, World Mental Health Year, hospital insurance, and dental health. In addition, three new displays were constructed on Civil Defence subjects and all other displays in storage were refurbished.

Some 22,000 individual requests for material were received and a total of 8,500,000 pieces of literature were distributed; 6,600,000 in English and 1,900,000 in French.

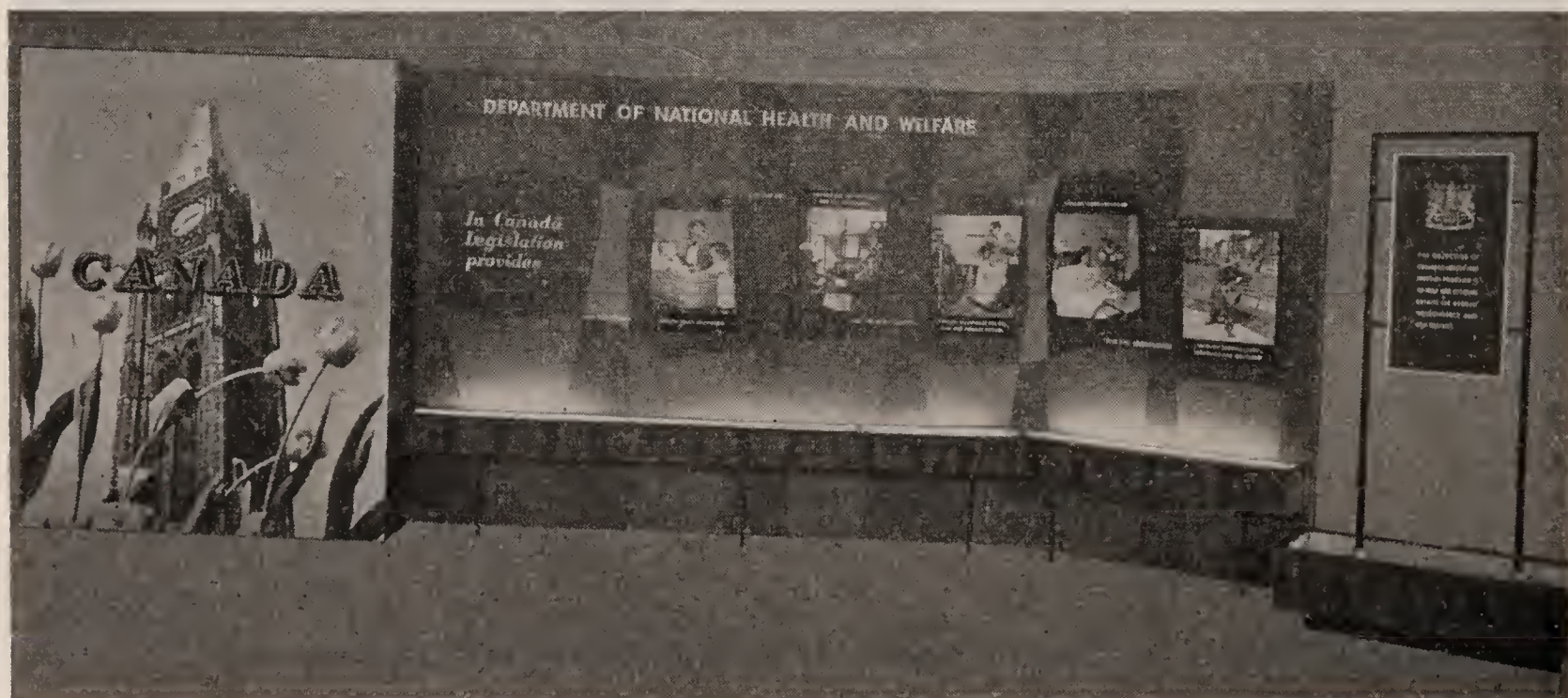
Public Information

Produced and distributed by this Division, during the year, were ten issues of *Canada's Health and Welfare*, including two supplements, comprising 720,000 copies; 97,325 copies of the *Civil Defence Bulletin*; 3,500 copies of the *National Health Radio Notes*; 5,320 copies of *Press Fillers*; 5,760 copies of *Canada's Health Column*; and 1,200 copies of the *Medical Services Journal*.

Other periodicals produced and distributed by the Division included: the *Occupational Health Bulletin*, the *Occupational Health Review*, *Canada's Mental Health*, *Nutrition Notes*, *Food and Drug News*, *Indian Health Newsletter*, and the *Dental Health Newsletter*.

The *Here's Health* series of radio dramas moved into its eleventh consecutive year. The weekly broadcasts were carried by 109 private radio stations, an increase of two stations over the previous year. Consideration continued to be given to ultimate entry into the field of television.

The continuing process of procuring, screening, and evaluating films was carried out. Fifteen were added to the National Health Film Library, three to the National Welfare Film Library, and 15 to the National Medical and Biological



Film Library. During the year, 2,039 films were booked from the National Health Film Library, 819 from the National Medical and Biological Film Library, and 87 from the National Welfare Film Library. Requests from field nurses for films were so great that the Indian and Northern Health Services Directorate has decided to set up a separate film library.

The Biological Photographic Laboratory produced 11,912 photographic prints, 3,451 black and white negatives, and 1,357 lantern slides. Color work included the processing of 975 color transparencies and 226 full color prints.

The Laboratory of Hygiene required a large number of photographs of various staphylococcus vaccines as well as paper chromatograms and high voltage chromatograms in both black and white and in color. The Food and Drug Directorate utilized the Division's photographic services to photograph a great many specimens including, under ultra violet light, the eyes of rabbits in a toxicity study of hair shampoos, and pathological specimens of rats receiving food colors. Also prepared were a large number of photomicrographs, in color, of the bone marrow and liver tumours in rats being used in chronic toxicity studies.

Complete photographic coverage of Frobisher Bay with particular attention to the medical treatment of Eskimos in the area was undertaken during the year.

In addition to a full program of scientific work for the departmental laboratories, many slides and photoprints were produced for use on television, theatre screens and in various types of publications. The Canadian Civil Defence College and Headquarters were provided with training aids, slides and filmstrips.

Public Relations

Liaison with the press, radio, and television was maintained by means of press releases, the answering of enquiries from the press, the facilitation of interviews for radio and television and the supplying of both news story leads and background information.

Assistance was given to a number of people visiting Canada under the Technical Assistance program of the Colombo Plan and other sponsorship, including lectures on the work of the Department. Enquiries from other government departments and from the general public were answered.

Members of the Division represented the Department at the Canadian Public Health Association, the American Public Health Association, the Ontario Public Health Association, the Conference of the College of General Practice, the National Conference on Social Welfare, the Canadian Dental Association, the International Congress of Paediatricians, the French Canadian Medical Association, the Comité des hôpitaux du Québec, the workshop on education of the Canadian Cancer Society of Quebec, and the French Canadian Weekly Newspaper Association.

LEGAL DIVISION

The Legal Division provides legal services to the Department in matters within departmental responsibility and concern. These services cover the furnishing of legal advice and opinion, including advice respecting prosecutions under the Food and Drugs Act, the Opium and Narcotic Drug Act, the Family Allowances Act,

and the Old Age Security Act. The services of the Division include the preparation of contracts and other legal documents, the interpretation of statutes and regulations and the preparation of memoranda and submissions to the Cabinet, the Governor-General-in-Council and to the Treasury Board. Performance of these services entails the maintenance of liaison with other departments and agencies of government including the Department of Justice and, in matters relative to the Opium and Narcotic Drug Act and the Food and Drugs Act, the Royal Canadian Mounted Police.

Assistance was provided by the Division during the year in the development of material and preliminary drafts required in preparing legislation, including certain amendments and revisions required to give full effect to the Hospital Insurance and Diagnostic Services Act and Regulations. Officers of the Division participated in conferences with hospital insurance and other authorities of the provinces with a view to the settlement of technical procedures for the implementation of cost-sharing agreements.

The services of the Legal Division were also required in the revision and consolidation of certain of the regulations administered by the Department preparatory to their submission to the Department of Justice, in the collection of overpayments made under the Family Allowances Act and the Old Age Security Act, and in the recovery of compensation for the loss of or damage to Crown property.

The Legal Division provided consultative legal services to a number of voluntary health agencies and organizations, and the officers of the Division represented the Department on various boards concerned with policy and administrative matters in which the Department has some interest or responsibility.

At the request of the World Health Organization, the Legal Adviser provided further consultative services to the Government of Trinidad in the revision of public health legislation in that country.

LIBRARY

The Departmental Library continued the selection, acquisition, and organization of reference and technical books, serials, pamphlets, and government documents on all subjects related to the Department's work for collections in Ottawa and in field establishments. The usual services of centralized ordering and cataloguing, answering questions, and advising about authorities and sources of information were maintained. The collection housed in the Jackson Building prior to the explosion continued to be stored in the Public Records Building.

Reorganization plans were made for the establishment of a reference library in the Jackson Building. Staff concerned with all departmental library collections continued to be located in the Food and Drug Building until permanent quarters are available.

Lists of medical books requested under the Colombo Plan Medical Scheme from 58 medical school libraries in South East Asia were examined for conformity to the selection policy established. Approximately 11,000 copies of 1,000 titles were approved for order, while about 500 titles were rejected after investigation.

Other assistance related to the procurement of medical books was given as requested by the Economic and Technical Assistance Branch of the Department of Trade and Commerce.

PERSONNEL SERVICES DIVISION

The function of Personnel Services is to see that arrangements are made for the maintenance of an effective work force in accordance with acceptable standards of personnel administration and in conformity with the regulations established by the Civil Service Act and other Civil Service law and custom. The Director of Personnel Services represents the Department in its dealings with the Civil Service Commission, the Treasury Board, the Staff Associations, and other organizations concerned with the Department's organization and personnel management.

General Personnel Services, Organization and Management

For each major Directorate of the Department there is, within Personnel Services, a General Personnel Services Division headed by a Senior Personnel Administrator who advises the officers of the Directorate on all matters reflecting on the organization and management of staff, and who develops and administers the Directorate's program relating to the hiring, promoting, classifying, and training of personnel. Thus many of the activities of these divisions are reflected in the annual reports of the directorates they serve.

The Director of Personnel Services co-ordinates the work of the personnel administrators and in collaboration with them, develops and applies standard policies throughout the Department. As a result of this close collaboration, the Director obtains an appreciation of the organization features of the whole Department so that he can make appropriate recommendations concerning over-all departmental organization.

During the past fiscal year, the following significant organizational changes involving more than one directorate or division were implemented:

- (a) The reallocation of Civil Defence and Emergency Measures responsibilities. Plans for two new divisions, Emergency Health Services and Emergency Welfare Services, were developed, and the status of the Civil Defence College was changed to that of a division of the Welfare Branch.
- (b) Further consolidation of registry services with the transfer of the Personnel Services Registry to the Registry Services Section of the Departmental Secretary's Division.

The use of departmental advisory committees to consider problems of special classes has been extended. There are now separate advisory committees on the employment of medical officers, chemists, and nursing officers. These committees comprise selected senior officers of the profession concerned together with members from Personnel Services. It has been found that recommendations relating to such matters as classification, training, and conditions of employment which have been made by these committees usually receive the support of both management and staff.

Pay Administration and Employee Services

The sections of this Division provide services which are a common requirement of all directorates. One section, which has recently been reorganized, is responsible for the administration of pay and leave regulations and the maintenance of personnel records. Another section is concerned with the administration of the Superannuation, Group Hospital Insurance, and related plans. This section has been preparing for the new Government-supported Group Surgical Medical Insurance Plan which is to be effective July 1, 1960.

Much attention has been given to the application of the Isolated Post Regulations and problems relating to employee benefits for persons serving in remote localities especially in the Yukon and Northwest Territories.

STAFF CHANGES WITH SPECIAL REFERENCES TO PROFESSIONAL CLASSES

Classifications	Authorized Positions March 31, 1960	Vacant Positions March 31, 1960	Appointments During Fiscal Year	Terminations During Fiscal Year	Approximate Terminations per 100 Positions
Physicians.....	324	33	30	27	8.3
Dentists.....	23	4	6	4	.....
Registered Nurses.....	732	71	228	247	33.7
Chemists.....	109	9	8	11	10.0
Bacteriologists.....	36	8	1	3	.....
Biologists.....	3	1	2	1	.....
Veterinarians.....	1	.....	1	.....	.....
Pharmacists.....	7	1	3	3	.....
Laboratory Technicians	20	11	19	16	.....
Nutritionists.....	18	.....	3	.....	.....
Dietitians.....	13	3	2	2	.....
X-Ray Operators.....	37	5	2	3	.....
Food and Drug Inspectors.....	77	4	6	6	.....
Public Health Engineers.....	31	5	4	2	.....
Social Workers	29	11	2	3	.....
Architects.....	3	1	1	.....	.....
Economists.....	22	6	.....	5	.....
Information Officers.....	10	3	1	2	.....
Statisticians.....	11	3	.....	.....	.....
All Other Classes	3,636	401	821	869	23.8
Total.....	5,142	580	1,140	1,204	23.4

TABLE 42
GEOGRAPHICAL DISTRIBUTION OF ESTABLISHED FULL-TIME POSITIONS—MARCH 31, 1960

Location	Welfare Branch (Including Civil Defence)	Health Branch		Administration Branch	Total
		Indian & Northern Health Services	Other Services		
Ottawa.....	113*	72**	651	364	1,210
Yukon and Northwest Territories.....		174			174
British Columbia.....	72	535	61		668
Alberta.....	59	585	9		653
Saskatchewan.....	55	233	3		291
Manitoba.....	49	212	32		293
Ontario.....	392	236	56		684
Quebec.....	219	25	95		339
New Brunswick.....	42	1	11		54
Nova Scotia.....	53	8	57		118
Prince Edward Island.....	11		1		12
Newfoundland.....	31		12		43
United States.....					
Overseas			152		152
Total.....	1,106	2,081	1,140	364	4,691

*Of these 113 positions 88 are associated with Civil Defence and 39 are vacant and will not be filled as a result of the reallocation of certain Civil Defence responsibilities to other government departments.
**46 of these positions are in Headquarters and 26 in the Eastern Regional Office which is also located at Ottawa.

PURCHASING AND SUPPLY DIVISION

The Purchasing and Supply Division continued to carry out its responsibility for procuring materials and equipment, entering into contracts, and arranging services of all types for the various directorates, divisions, laboratories, hospitals, far-flung Arctic posts of the Indian and Northern Health Services, and the overseas offices of the Immigration Medical Service.

The amount of technical and scientific equipment purchased for the various laboratories in Ottawa increased, particularly that developed to meet new advances in the electrical, electronic, and nuclear radiation fields of instrumentation.

The high cost of food, food products, and transportation required more stringent supervision of purchasing in these areas.

Approximately 14,500 requisitions were processed, comprising almost every commodity and involving orders placed with manufacturers in Canada, the United States, the United Kingdom, and Continental Europe. This required the issue of over 11,000 inquiries to the trade for prices and delivery, and the processing of 25,400 invoices. Included in this work and in the expediting necessary to follow up on deliveries was the writing of 11,000 pieces of correspondence and follow-up cards. There were 158 inquiries from Public Works Department concerning space outside Ottawa.

A forms control program was started and has already shown good results. It is expected that this program will effect a considerable saving of funds and a decline in the number and variety of forms.

A continued refinement of inventory procedures and the preparation of inventory reports to the Treasury Board were carried out. The Master Inventory, which is maintained by this Division, has been found to be of increasing use to departmental officers for cost analyses and reports.

RESEARCH AND STATISTICS DIVISION

Progress was made during the year on a number of major projects outside the routine work of the Division. In co-operation with the provinces, the Health Insurance Division, and the Dominion Bureau of Statistics, the Division devoted substantial staff time to the development of the federal-provincial procedures required under the Hospital Insurance and Diagnostic Services Act of 1957. An acceleration of work in a number of fields, notably hospital insurance, Indian and Northern Health Services, and in a number of biostatistical studies, was made possible by the new mechanical tabulation equipment acquired during the year. As in the past, reports and articles were prepared on different aspects of health and welfare in Canada for the United Nations and other agencies, for periodicals, and for publications such as the "Canada Year Book". Members of the Division gave papers at and assisted in meetings of organizations concerned with health and welfare matters.

Hospital Insurance and Services

Co-operation continued to be extended to the Health Insurance Division and other federal and provincial agencies concerned with the Hospital Insurance and

Diagnostic Services program. A number of field trips were made to provide consultant services to the provinces. Estimated per capita costs for in-patient services for Canada were prepared as a basis for determining federal advances to the provinces during 1959 and 1960, as well as final costs and payments to the provinces for 1958. Members of the Division worked with the Interdepartmental Committee on Hospital Insurance for the Northwest Territories and Yukon and assisted the Northwest Territories administration in the development of its program. Work was continued in the planning of statistical requirements for use by the hospital insurance administration and a program of statistical tabulations was worked out with the Dominion Bureau of Statistics.

The Director was loaned as a consultant on a part-time basis, commencing the latter part of the year, to the Province of Manitoba as chairman of the Hospital Survey Board which also included a medical consultant and a hospital consultant. The Board was asked to study and advise on the adequacy of the supply and distribution of hospital bed accommodation in Manitoba and the relative needs for chronic, convalescent, and active treatment facilities; the relationship of long term hospital facilities to alternative care provisions; and the adequacy of the supply and distribution of hospital personnel and of hospital training facilities. Two research officers of the Division were also loaned on a part-time basis as research assistants to the Survey Board. A substantial part of the survey work was carried out during the year. The Director of the Division was chairman of the Federal-Provincial Committee on Quality of Care and Research and Statistics and members of the staff served on this Committee and on the working party set up to carry on studies related to special problems referred to it by the Committee.

A comprehensive bulletin, "Hospital Care in Canada: Recent Trends and Developments", was completed for publication in 1960. It provides a detailed analysis of trends in general, and allied special hospitals and mental and tuberculosis institutions, with special reference to utilization of services, bed facilities and requirements, personnel and auxiliary services, and costs and arrangements for financing. Material was prepared for inclusion in the first Annual Report on Hospital Insurance. Members of the Division participated in departmental studies of long-term hospital care programs, quality of care, financing of services, and statistics.

Medical Care Services

The bulletin "Health Services for Public Assistance Recipients in Canada", which describes programs in the five provinces providing these services through formal arrangements, and services available in the remaining provinces, was published. A second bulletin, "Voluntary Medical and Hospital Insurance in Canada, 1958", was in course of preparation for publication in 1960.

Mental Health

At the request of the National Advisory Committee on Mental Health, a survey of psychiatric units in general hospitals was carried out, to provide detailed information on working methods, admission policies, after-care programs, and other procedures. A preliminary report was presented to the Committee shortly

after the end of the year. A comprehensive bulletin, "Mental Health Legislation in Canada", was also completed as part of Canada's contribution to the International Mental Health Year. The Division participated in a review of mental health services development in Canada for the World Health Organization, and assisted the Mental Health Division in a number of mental health studies in Newfoundland, Quebec, Ontario, and Manitoba, by designing reporting schedules and punch cards and by the processing and analysis of data. Some work was undertaken, in collaboration with the Dominion Bureau of Statistics, on study of length of stay in mental hospitals and on psychiatric unit admissions.

Chronic Illness

With the establishment of a Departmental Committee on Chronic Diseases and Health Problems of the Aged, the Division was represented on the Committee and on each of the several sub-committees studying various facets of this subject. The Principal Research Officer, Biostatistics, presented papers at a workshop on cancer records sponsored by the National Cancer Institute and at a University of Toronto School of Hygiene refresher course.

Rehabilitation Services

Efforts during the year were concentrated mainly on completing for publication, the comprehensive bulletin, "Rehabilitation Services in Canada, Part I", (Part II was published the previous year) which included a review of the rehabilitation process, the extent of disability, the historical development of services, and full descriptions of existing federal, provincial and voluntary programs. Assistance was given to the National Co-ordinator of Rehabilitation in projects such as a nation-wide survey of sheltered workshops. A bibliography of rehabilitation references was prepared for the International Social Service Review.

Biostatistics Services

As in other years, treatment statistics were analysed and reported on quarterly for the Directorate of Indian and Northern Health Services. In co-operation with the Epidemiology Division, a record system for poison control statistics from centres throughout Canada was developed for the Food and Drug Directorate. Consultation was provided to a number of divisions of the Health Branch in the planning of projects. Projects in which aid was given to these divisions included a follow-up study of the children of women irradiated during pregnancy; a study of the functions of local health units; a survey of infant care practices in hospitals in Canada; a study of the health of fluorspar miners; and the design of an experiment for the comparison of types of dustfall gauges. Statistical analyses were carried out on a considerable variety of projects and services. These included the calibration of radiation-measuring devices; methods of reporting cases of poliomyelitis; an investigation of the effectiveness of stannous fluoride in inhibiting dental caries; trends and regional variations in Strontium 90 estimates in powdered milk samples; records of the Radiation Film Monitoring Service for the calendar

year 1959; tabulation of reported cases of staphylococcal infections in hospitals; and the results of interviews in nutrition surveys among older persons in Winnipeg and Ottawa.

A good deal of work was done in the processing of data for the Department's continuing study of the mortality of D.V.A. pensioners in relation to smoking habits and other characteristics. The Radiation Protection Division was assisted in developing plans for the automation of its film monitoring system, with respect particularly to the development of a mechanical punch card system. The Consultant in Physical Fitness and Recreation was assisted in planning the analysis of results of tests carried out on about 10,000 individuals in various parts of Canada.

The Principal Research Officer, Biostatistics, in his capacity as Consultant on Statistics to the Department of Veterans Affairs, continued to advise that Department on statistical matters.

Replies were prepared to requests for statistics concerning such subjects as stroke, fracture, ulcers, heart disease, asthma and chronic bronchitis, multiple sclerosis, epilepsy, and on matters dealing with survey methodology.

Health Manpower

A survey of physicians was carried out during 1959 and the processing of returned questionnaires was largely completed during the year. This was the latest of a series of periodic surveys designed to provide basic information on the supply and distribution of doctors in Canada in relation to characteristics such as age, nature of practice, etc. Departmental memos were prepared on a number of matters related to the supply and distribution of physicians. The Director of the Division assisted the Canadian Nurses Association in connection with a pilot evaluation survey of schools of nursing carried out by the Association.

Income Security

A large amount of time was devoted to assistance to Dr. Robert Clark on his report, "Old Age Security in Canada and the United States". Developments in the introduction of graduated old age security in the United Kingdom were studied and bulletins of old age security in Australia and New Zealand completed. Brief outlines on old age security provisions in Sweden, the United Kingdom, and West Germany were prepared for the House of Commons Committee on Estimates.

The Supervisor of the Income Security Section participated actively in the work of the Interdepartmental Committee on Pension Plans for Older Workers and in that of the Advisory Committee to the Dominion Statistician on Pension Plan Statistics. The International Labour Organization was also assisted by the supplying of material on employee pension plans for civilian air personnel. The Division's work in the analysis and reporting on Disability Allowances statistics was continued.

The Division worked closely with the Labour Department in the preparation of material on social security expenditures for the years 1955-57 for the International Labour Organization and on other statistical material for inclusion in the Year Book of Labour Statistics. Preparation of a bulletin on government expenditures on social security in Canada was commenced.

Material on income security in Canada was prepared to meet requests from the Governments of Bolivia, Cuba and Italy and on different aspects of social security for a number of United States authorities.

Welfare

The bulletin, "Child Welfare in Canada", was published and the third edition of the bulletin, "Mothers' Allowances Legislation in Canada", was completed. Publication of a draft bulletin on social assistance, also completed, was delayed to incorporate anticipated major legislative changes in welfare services in some provinces. A study of provincial programs affecting living accommodation for the elderly was completed. Articles covering legislative changes in provincial general assistance programs, mothers' allowances, and services for the aged in the years 1958 and 1959 were published in the "Labour Gazette".

In co-operation with one of the provinces, a social investigation of a group of families affected with Aniridia an hereditary eye disease, was planned and conducted for the Blindness Control Division.

Study of the economic position, living accommodation, retirement, and other problems of elderly and chronically ill persons was done for the Subcommittee on Housing, Nutrition, and Activities of Daily Living of the Departmental Committee on Chronic Illness and Health Problems of the Aging. An officer of the Division attended the Conference on Aging of the University of Michigan and the National Leadership Training Institute, at Ann Arbor, Michigan, the latter organized in preparation for the White House Conference on Aging to be held in 1961. Another attended the White House Conference on Children and Youth held in Washington, D.C. Work on child welfare reporting and statistics was continued, and working papers on adoption reporting prepared.

Advisory services were provided to other divisions of the Department and to other agencies in connection with research studies and on such subjects as welfare components of health programs, adoption of refugee children, and desertion legislation. Memoranda were prepared on various aspects of such subjects as needs of and services for the aged, social assistance, recreational facilities, community organization programs, day nursery services, and juvenile delinquency.

The Director served on the Committee of Social Science Research of the International Association on Gerontology; the National Agency Committee of Community Funds and Councils of Canada; and, with the Supervisor of the Welfare Section, on the Interdepartmental Committee on Older Workers; and the Executive of the National Committee on Aging of the Canadian Welfare Council. The Supervisor of the Welfare Section and other members of the Division were active on technical and advisory committees, and a good deal of work was done for the National Committee on Desertion of the Canadian Welfare Council and the Sub-committee on Desertion Legislation.

Technical Assistance to Underdeveloped Countries

The Director, following on assignments in Costa Rica and Jamaica, was invited to act as a short-term consultant to the Government of Puerto Rico in connection with a survey of Puerto Rican health services. Material on health and welfare matters was collected or prepared for a number of countries. As in other years, training programs were arranged as required for persons coming to Canada for a study in the welfare field under the auspices of the United Nations programs, the Columbo Plan, the U.S. International Co-operation Administration, and other agencies.

DEPARTMENT OF NATIONAL HEALTH AND WELFARE

DIRECTORY OF DEPARTMENTAL OFFICERS

MINISTER

HONOURABLE J. WALDO MONTEITH, P.C., M.P., F.C.A.

Executive Assistant, C. Keedwell

Private Secretary, D. H. Dunsmuir

Deputy Minister of National Health and Welfare (Health)

G. D. W. Cameron, M.D., C.M., D.P.H., LL.D., F.R.C.P.

Deputy Minister of National Health and Welfare (Welfare)

G. F. Davidson, B.A., M.A., Ph.D., LL.D.

HEALTH BRANCH

FOOD AND DRUG DIRECTORATE:

FOOD AND DRUG DIRECTORATE—Director, C. A. Morrell, M.A., Ph.D., F.R.S.C.

Associate Director, L. I. Pugsley, B.A., M.Sc., Ph.D.

Assistant Director (Scientific Services), R. A. Chapman, B.S.A., M.Sc., Ph.D.

Assistant Director (Inspection and Enforcement Services), A. Hollett, B.Sc., M.Sc.

Chief, Proprietary or Patent Medicines Division, P. Soucy, Phm.B.

INDIAN AND NORTHERN HEALTH SERVICES DIRECTORATE:

Director, P. E. Moore, M.D., D.P.H.

Associate Director, H. A. Procter, D.S.O., M.D., Ph.D.

Assistant Director, W. B. Brittain, B.Sc.

HEALTH SERVICES DIRECTORATE:

Director, K. C. Charron, M.D., C.M.

Principal Executive Officer, J. H. Horowicz, LL.D.

Principal Medical Officers:

Environmental Health and Special Projects, E. A. Watkinson, M.D., C.M., D.P.

Health Insurance, E. H. Lossing, M.D., M.P.H.

National Health Grants, G. W. Wride, M.D., D.P.H.

Research Development and International Health, B.D.B. Layton, M.D., M.P.H.

SPECIAL HEALTH SERVICES:

Blindness Control Division, *Chief, J. H. Grove, M.D.*

Child and Maternal Health Division, *Chief, J. F. Webb, B.Sc., M.D., D.P.H.*

Dental Health Division, *Consultant, H. K. Brown, D.D.S., D.D.P.H.*

Emergency Health Services Division, *Chief, E. J. Young, M.D., D.P.H.*

Epidemiology Division, *Chief, E. W. R. Best, M.D.*

Hospital Design Division, *Chief, H. E. Hughes, B. Arch, A.R.I.B.A., M.R.A.I.C.*

Laboratory of Hygiene, *Director, J. Gibbard, B.S.A., S.M., F.R.S.C.*

Medical Rehabilitation and Disability Advisory Service, *Consultant, B. Primeau, M.D.*

Mental Health Division, *Chief, J. E. Gilbert, M.B., B.S., M.R.C.S., L.R.C.P.*

Chief Nursing Consultant, D. M. Percy, R.R.C., R.N.

Nutrition Division, *Chief, L.B. Pett, B.S.A., M.A., Ph.D., M.D., C.P.H.*

Occupational Health Division, *Chief, T. H. Patterson, M.D., D.P.H., M.P.H.*

Public Health Engineering Division, *Chief, J. R. Menzies, B.A.Sc., C.L.S.C.E.*

Radiation Protection Division, *Clinical Consultant, W.J.D. Cooke, M.D.*

MEDICAL ADVISORY SERVICES:

Principal Medical Officer, R. G. Ratz, M.B.

Civil Aviation Medicine Division, *Chief*, W. A. Prowse, M.D., C.M., D.P.H.

Civil Service Health Division, *Chief*, E. L. Davey, M.D., D.P.H.

Quarantine, Immigration Medical and Sick Mariners Services, *Chief*, W. H. Frost, M.D., D.P.H.

NARCOTIC CONTROL DIVISION:

Chief, R. C. Hammond, Phm.B.

Narcotic Drugs, *Canadian Representative to UN Commission*, K. C. Hossick.

WELFARE BRANCH

Executive Assistant, Welfare, Mrs. D. B. Sinclair, O.B.E., B.A., M.A., LL.D., D.Sc. Soc., L.H.D. (on leave)

Consultant, Fitness and Recreation, Doris W. Plewes, M.A., B. Paed., Ed.D.

FAMILY ALLOWANCES AND OLD AGE SECURITY DIVISION:

National Director, J. Albert Blais

Regional Directors:

Newfoundland, L. C. Abbott, St. John's

Prince Edward Island, J. E. Green, Charlottetown

Nova Scotia, M. T. Blue, Halifax

New Brunswick, A. Nicholson, Fredericton

Quebec, J. M. L. Lafrance, Quebec

Ontario, F. C. Jackson, Toronto

Manitoba, W. F. Hendershot, Winnipeg

Saskatchewan, R. J. G. Mitchell, Regina

Alberta, H. C. L. Gillman, Edmonton

British Columbia, W. R. Bone, Victoria

Yukon and Northwest Territories, Miss Norma O'Brien, Ottawa

OLD AGE ASSISTANCE, ALLOWANCES FOR BLIND PERSONS, AND ALLOWANCES FOR DISABLED PERSONS:

Director, J. W. MacFarlane

Officer in Charge, Unemployment Assistance, R. B. Splane, B.A., M.A., M.S.W.

EMERGENCY WELFARE SERVICES DIVISION:

Chief, P. H. Stehelin, LL.B.

ADMINISTRATION BRANCH

Secretary's Division, *Departmental Secretary*, Olive J. Waters

Information Services Division, *Director*, Harvey W. Adams

Legal Division, *Legal Advisor*, R. E. Curran, Q.C., B.A., LL.B.

Library, *Departmental Librarian*, Miss M. D. Morton, B.H.Sc., B.L.S.

Personnel Division, *Chief*, E. J. Preston, B.A., M.A.

Purchasing and Supply Division, *Chief*, J. A. Hickson

Research and Statistics Division, *Chief*, J. W. Willard, Ph.D., M.A., M.P.A., A.M.

TRANSLATION OFFICE

Chief, G. A. Sauve

TREASURY OFFICE

Chief, T. F. Philips

DIRECTORY OF DEPARTMENTAL ESTABLISHMENTS**ADMINISTRATIVE OFFICES****OTTAWA**

Jackson Building, Bank Street
 Birks Building, Sparks Street
 Booth Building, Sparks Street
 Garland Building, Queen Street
 No. 1 Temporary Building, Wellington Street
 No. 3 Temporary Building, Wellington Street
 Trafalgar Building, Queen Street
 Daly Building, Mackenzie Avenue
 Copeland Building, Albert Street
 Vimy Building, Queen Street

CIVIL DEFENCE COLLEGE

ARNPRIOR, ONT.—P.O. BOX 2050

FAMILY ALLOWANCES AND OLD AGE SECURITY

ST. JOHN'S, Nfld.	29 Buckmasters' Field
CHARLOTTETOWN, P.E.I.	Dominion Building
HALIFAX, N.S.	Ralston Building
FREDERICTON, N.B.	Federal Building
QUEBEC, P.Q.	51 Boulevard des Capucins
TORONTO, Ont.	122 Front Street West
WINNIPEG, Man.	138 Portage Ave., East
REGINA, Sask.	Dominion Government Building
EDMONTON, Alta.	Federal Building
VICTORIA, B.C.	Federal Building

FOOD AND DRUG LABORATORIES

OTTAWA, Ont.	Tunney's Pasture
HALIFAX, N.S.	Ralston Building
MONTREAL, P.Q.	379 Common Street
TORONTO, Ont.	27 St. Clair Ave., East
WINNIPEG, Man.	Federal Building
VANCOUVER, B.C.	Federal Building

FOOD AND DRUG OFFICES

OTTAWA, Ont.	Tunney's Pasture
HALIFAX, N.S.	Ralston Building
CHARLOTTETOWN, P.E.I.	Confederation Building
SAINT JOHN, N.B.	New Customs Building
SYDNEY, N.S.	Federal Building
ST. JOHN'S, Nfld.	Sir Humphrey Gilbert Building
QUEBEC, P.Q.	375 Dorchester Street
THREE RIVERS, P.Q.	Post Office Building

SHERBROOKE, P.Q.	315 King Street West
MONTREAL, P.Q.	379 Common Street
TORONTO, Ont.	27 St. Clair Ave., East
BELLEVILLE, Ont.	New Federal Building
HAMILTON, Ont.	National Revenue Building
KITCHENER, Ont.	Dominion Public Building
LONDON, Ont.	Dominion Public Building
WINDSOR, Ont.	Dominion Public Building
SUDBURY, Ont.	New Federal Building
PORT ARTHUR, Ont.	33 Court Street South
WINNIPEG, Man.	Federal Building
SASKATOON, Sask.	307 London Building
REGINA, Sask.	713 Motherwell Building
CALGARY, Alta.	Customs Building
EDMONTON, Alta.	Federal Building
KAMLOOPS, B.C.	345 Victoria Street
VANCOUVER, B.C.	Federal Building
VICTORIA, B.C.	Belmont Building

IMMIGRATION MEDICAL SERVICE OFFICES

Canada

ST. JOHN'S, Nfld.	Sir Humphrey Gilbert Building
GANDER, Nfld.	Gander Airport
STEPHENVILLE, Nfld.	Harmon Field Airport
SYDNEY, N.S.	Marine Hospital and Reserve Airport
HALIFAX, N.S.	Immigration Building, Pier 21, and International Airport, Kelly Lake
MONCTON, N.B.	Moncton Airport
SAINT JOHN, N.B.	Immigration Building, Pier 9
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	150 St. Paul Street West
DORVAL, P.Q.	International Airport
TORONTO, Ont.	175 Bedford Road and Malton Airport
WINDSOR, Ont.	Windsor Airport
LONDON, Ont.	London Airport
WINNIPEG, Man.	Immigration Hall, 83 Maple St., and Winnipeg Airport
EDMONTON, Alta.	Edmonton Airport
VANCOUVER, B.C.	Immigration Building, foot of Burrard Street and Sea Island Airport
VICTORIA, B.C.	816 Government Street

Overseas

LONDON, England	61 Green Street, Mayfair, W.1
BELFAST, Northern Ireland	22 North Street
BRISTOL, England	5-18 Wine Street
GLASGOW, Scotland	18 Woodlands Terrace, C.3
LEEDS, England	5-7 New York Road
LIVERPOOL, England	34 Moorfields, Liverpool 2
BRUSSELS, Belgium	230 rue Royale
PARIS, France	38 Avenue de l'Opera
ROME, Italy	Via Acherusio Sud 9
THE HAGUE, Holland	12 Carel Van Bylandtlaan
COPENHAGEN, Denmark	Canadian Legation, Vestagervej 5
BERLIN, Germany	Berlin-Charlottenburg 2, Uhlandstr. 20-25, Aufgang II
COLOGNE, Germany	Canadian Embassy, Visa Section, Buchheimerstrasse 64-66, Weiner Platz, Cologne- Meulheim
MUNICH, Germany	Am Lillienberg 1-2, Munich 8
STUTTGART, Germany	Marquardt Gebaeude, Koenigstrasse 20
HAMBURG, Germany	Canadian Consulate, Visa Office, Admiralitaetstrasse 46
BERNE, Switzerland	43 Neuengasse, Interhaus, 2nd Floor
VIENNA, Austria	Canadian Embassy, Medical Section, Tuchlauben 8, Vienna
ATHENS, Greece	Canadian Embassy, Visa Office, 54A Queen Sofia Street
HELSINKI, Finland	Canadian Embassy, Visa Office, Bulevardi 10A

SICK MARINERS CLINICS AND HOSPITALS

HALIFAX, N.S.	Immigration Building, Pier 21
SYDNEY, N.S.	Marine Hospital
SAINT JOHN, N.B.	Immigration Building, Pier 9
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	150 St. Paul Street West
VANCOUVER, B.C.	Immigration Building, foot of Burrard Street

QUARANTINE STATIONS AND SUB-STATIONS

GANDER, Nfld.	Gander Airport
ST. JOHN'S, Nfld.	Sir Humphrey Gilbert Building
SYDNEY, N.S.	Marine Hospital and Airport

HALIFAX, N.S.	Pier 21 and International Airport, Kelly Lake
SAINT JOHN, N.B.	Pier 9 and Quarantine Hospital, Lancaster
QUEBEC, P.Q.	Champlain Harbour Station, Wolfe's Cove
MONTREAL, P.Q.	150 St. Paul Street West 320 Baldwin Street
BAIE COMEAU, P.Q.	Sub-Station
SEVEN ISLANDS, P.Q.	Sub-Station
RIMOUSKI, P.Q.	Sub-Station
PORT ALFRED, P.Q.	Sub-Station
THREE RIVERS, P.Q.	Sub-Station
SOREL, P.Q.	Sub-Station
DORVAL, P.Q.	International Airport
VICTORIA, B.C.	816 Government Street
VANCOUVER, B.C.	Immigration Building and Sea Island Airport

INDIAN AND NORTHERN HEALTH SERVICES

EASTERN	4th Floor Booth Building, Ottawa
CENTRAL	705 Commercial Building, 169 Pioneer Ave., Winnipeg
SASKATCHEWAN	735 Motherwell Building, Regina
ALBERTA	Charles Camsell Indian Hospital, Edmonton
BRITISH COLUMBIA	4824 Fraser Street, Vancouver

LABORATORY OF HYGIENE

OTTAWA, Ont.	Tunney's Pasture
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OCCUPATIONAL HEALTH LABORATORIES

OTTAWA, Ont.	45 Spencer Street
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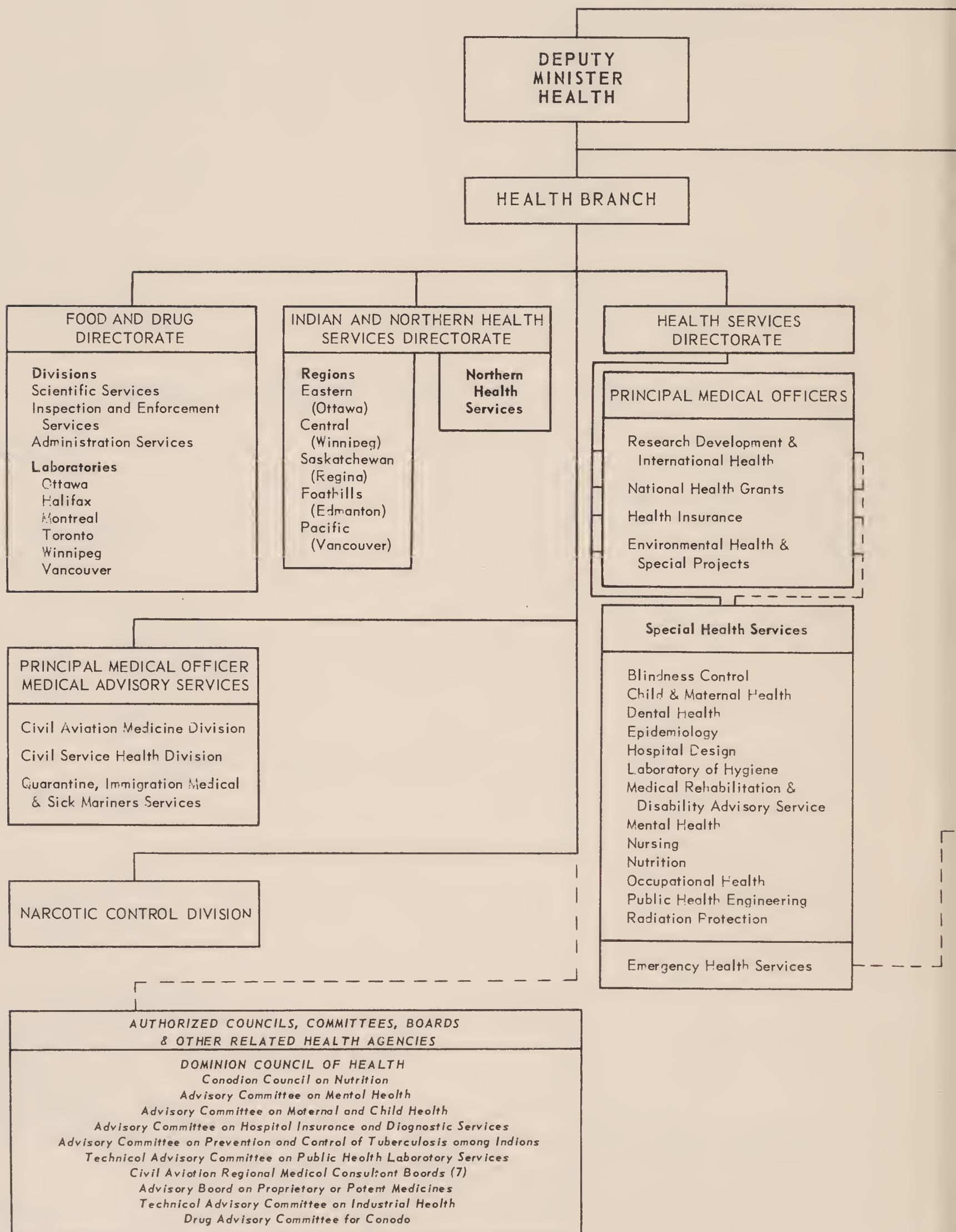
PUBLIC HEALTH ENGINEERING DISTRICT OFFICES

TRURO, N.S.	P.O. Box 608, Federal Building
MONCTON, N.B.	P.O. Box 86
MONTREAL, P.Q.	150 St. Paul Street West
ST. CATHARINES, Ont.	Dominion Building
PORT ARTHUR, Ont.	Post Office Building
ST. BONIFACE, Man.	Post Office Building
REGINA, Sask.	Motherwell Building
EDMONTON, Alta.	Federal Building
VANCOUVER, B.C.	Room 509, Federal Building

RADIATION PROTECTION

OTTAWA, Ont.	305 Vimy Building
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DEPARTMENT OF NAT



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